The Air Force Journal of Occupational, Recreational, and Driving Safety

ROAD & REC

Volume 12, Number 4 Fall 2000

Small Cars — Will they save you in a "crunch?"

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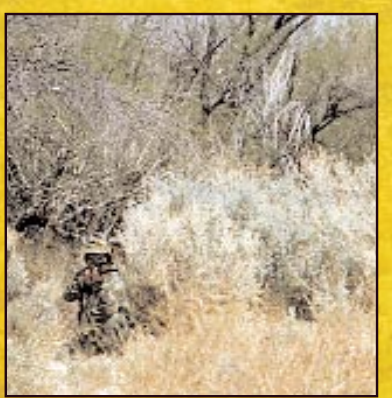

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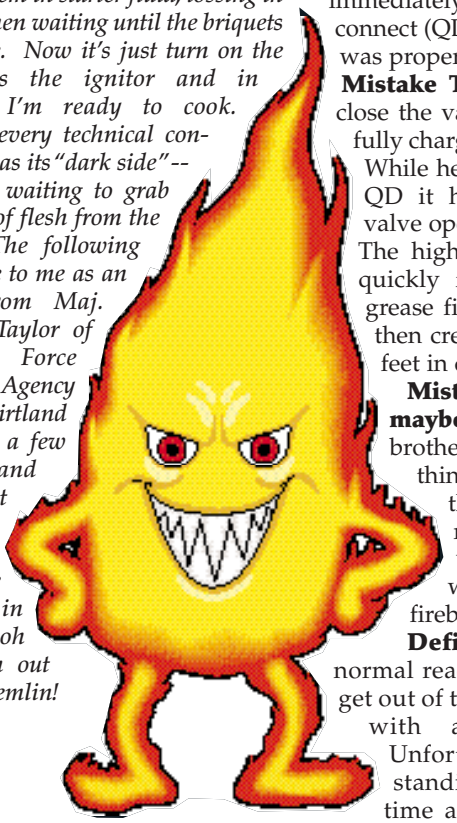
Features

Front cover and top photo, this page, courtesy of the ***Insurance Institute for Highway Safety***

Back cover photo by **MSgt Perry Heimer**

Make Mine Extra Crispy!

Editor's Note: *I love my propane barbecue. No more stacking briquets, dousing them in starter fluid, tossing in a match, then waiting until the briquets turn white. Now it's just turn on the gas, press the ignitor and in moments I'm ready to cook. However, every technical convenience has its "dark side" -- a gremlin waiting to grab its pound of flesh from the unwary. The following story came to me as an e-mail from Maj. Kevin L. Taylor of the Air Force Inspection Agency here at Kirtland AFB. Take a few minutes and check it out because you just may see yourself in here. And, oh yes, watch out for that gremlin!*



On May 7, 2000, my brother was burned fairly seriously over most of the right side of his body by a flash fire from his propane barbecue grill. He did ALMOST everything right, but he was in a hurry -- and that's what got him. The chain of events (a chain you'll want to avoid) is as follows:

My brother was outside working on a project while his wife was trying to grill some steaks. The fire kept going out, so she called my brother over to change the propane bottle. He put on the new propane bottle, then went back to what he was doing. So far, so good.

The fire still didn't seem to be burning properly, so my sister-in-law called my brother back to see what was wrong.

Mistake One: He was a bit irritated about the repeated interruptions, so he was in a bit of a hurry.

Mistake Two: She said the fire had died, so he **DIDN'T LOOK** inside the grill to see if there might be a residual grease fire. Instead, he immediately checked the quick disconnect (QD) connection to see if it was properly seated.

Mistake Three: He didn't fully close the valve on the new -- and fully charged -- bottle of propane. While he was working with the QD it hung up, holding the valve open for a second or two. The high-pressure propane gas quickly found its way to the grease fire on the grill, ignited, then created a fireball about 4-feet in diameter.

Mistake Number Four (or maybe just bad luck): My brother wasn't wearing anything but a pair of shorts at the time. Therefore, the right side of his body was unprotected as it was engulfed by the fireball.

Definitely Bad Luck: The normal reaction to a big fire is to get out of the way -- which he did with all available vigor. Unfortunately, his wife was standing behind him at the time and, as he jumped out of the way, she went flying and landed on her chin. That took 14 stitches to fix.

All things considered, it could have been worse. Had the QD stuck when he was removing the old bottle, the low pressure in that tank could have allowed the fire to travel back inside the bottle and cause it to explode like a bomb. That would have probably killed both of them.

Bottom Line: Before working with any gas line connection, do a thorough check of the area for ***ANY*** source of ignition. That could save you a lot of pain and down-time. ■

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Web page address for the Air Force Safety Center:
http://www-afsc.saia.af.mil

Commercial Prefix (505) 846-XXXX
E-Mail – vanelsbr @ kafb.saia.af.mil

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CONTRIBUTIONS
Editor
Road & Rec
HQ AFSC/SEMM
9700 G Avenue S.E., Ste 285B
Kirtland AFB NM 87117-5670

A CONVERSATION WITH THE NEW CHIEF

BOB VAN ELSBERG
Managing Editor

Major General Timothy A. Peppe became the new Air Force Chief of Safety and Commander of the Air Force Safety Center during a change of command ceremony held 8 June, 2000, at Kirtland AFB, NM. The son of a career Army soldier who served in World War II, Korea and Vietnam, General Peppe has spent more than 30 years in the Air Force. During that time his duties as a group and wing commander have given him a passionate concern for the safety of Air Force members on and off duty. In the following interview, General Peppe outlines some of those concerns.

Road & Rec: As you begin here as the new Chief of Safety, what from your experience in the Air Force most prepared you for this job?

General Peppe: Being a commander at various levels and having to deal with some of the responsibilities that come with that job.

Road & Rec: Could you elaborate on that, sir?

General Peppe: The third day that I was the ops officer for my unit at Zweibrucken we lost an airplane -- and it wasn't the last. During my tour from November 1985 through July 1988, we lost three more. One was due to crew error, while two resulted from a centerline tank problem where fuel sloshed back and forth and changed the center of gravity. The fourth aircraft was shot down by the Navy during Display Determination in the fall of 1987. The guys ended up punching out and, luckily, were not hurt too badly.

Road & Rec: What about off-duty accidents?

General Peppe: As a two-time wing commander, I, unfortunately, had the opportunity to deal with several motorcycle, swimming, and POV accidents which resulted in deaths. In one of these, a child wasn't properly strapped into a safety seat. At Laughlin AFB, Texas, we also had a suicide which quickly forced me to learn about rebuilding the morale of a squadron.

At Aviano, we had people living in 171 different villages, some as much as an hour away from the main base. They used little two-lane back roads to get to and from the base. The Italian roads were, in general, narrow and very slick during bad weather. Most people had at least one accident during their tour at Aviano.

I've also seen the nuclear surety side, with NSIs (nuclear surety inspections) and quantity-distance (Q-D) violations. I think all of the above and two well-publicized aircraft accidents on foreign soil — the T-43 in Croatia and the EA-6B in Italy — have given me a reasonable foundation for coming into this job.

Road & Rec: What is your most pressing concern regarding off-duty safety?

General Peppe: Motorcycles — with what I've seen as a commander, I just don't like them. I know they're fun and — if they were the ONLY thing out there — maybe they'd be all right. However, I've seen several people lose their lives through no fault of their own because of something somebody ***else*** did. A motorcyclist was being the safest person in the world when an Italian car hit him, knocked him into a guardrail, then just blew right past. Also, trucks often pull out right in front of motorcycles. It's the lack of protection that bothers me.

I've been to more funerals than I ever wanted to and I've seen too many parents and friends in those circumstances. It's not worth it. Clearly, if you want longevity, getting off a motorcycle is the best way to go.

Road & Rec: Are there other driving safety issues that are of particular concern to you?

General Peppe: What bothers me the most in my short tenure here is the loss of two lives in a motor vehicle accident where the driver wore his seat belt but didn't make sure his passengers wore theirs. Failure to use seat belts continues to cost Air Force personnel and families their lives.

Road & Rec: Why do you think people do unsafe things when, in many cases, they know better?

General Peppe: They just don't understand the pain and agony that goes on after they've gone out and tried to prove that they're invincible. They don't think about the impact their actions or deaths have on other people — be it their wives, mothers, dads, sisters, brothers, or the people who live around them.

Sooner or later we can replace some of the ***things*** that are lost, but you can't replace a human life. The suffering that results from a death caused by somebody's reckless actions or inattention to detail just goes on and on. We have to continue to talk risk management and to make people as aware as we can about how to do things safely.

Road & Rec: How do you reach people so that they will understand the consequences of being unsafe?

General Peppe: The most effective comments I've made were when I discussed a Laughlin motorcycle death and the aftermath with airmen. Going to the funeral with the honor guard — most of whom lived in the same dorm as the victim — and dealing with the agony they all felt at the church and the cemetery. Telling those airmen what it was like

to have the honor guard fold the flag in front of the parents, then watch me hand the flag to the father and mother. I just tell people that they need to think about the finality of their actions.

Road & Rec: What about our flying safety efforts? Are there any areas where you are especially concerned?

General Peppe: I continue to be concerned about the engine problems in the F-16. You've got one engine and if it goes bad, you've got to get out. I think we've got a handle on that right now by virtue of the work we've done in the last year or so and the money that's being invested in spare parts.

The other thing that you find in a couple of our accidents is the recurring theme of spatial disorientation. We need to continue to talk about that and to remind people that it can happen to them, in spite of what they might think.

Road & Rec: Our deployments have increased fourfold during the last decade. Does that pose its own safety problems?

General Peppe: If you look back over the past few years, being in a strange place at a strange time with strange weather has contributed to flight mishaps. So, from a risk management point of view, our folks need to constantly be aware of these dangers. When they're going into a strange airfield, they need to be ***especially*** alert. This is particularly true when they deploy and are landing their airplane at the end of a very long duty day. Obviously, the ground environment at the deployed location is never the same. Our guard must always be up.

Road & Rec: Do you have safety concerns about the support side of our flying operations?

General Peppe: Probably the other place in flight safety that concerns me right now is the experience level within our air traffic control field. We continue to lose many of our experienced airmen and we've got a lot of young, inexperienced kids coming in the pipeline. That gives us a tower and radar approach control force much junior to any my peers or I have ever seen. This is a place where we have had some problems. I would dare say there's not an Air Force base in the world that hasn't had HATRS (Hazardous Air Traffic Reports) where a minor mistake has gotten some people closer than we would like them to be.

The other issue that we've got to look at is the crew force in the aircraft maintenance squadrons. At Aviano they were an extremely young, dedicated bunch of kids. However, they were inexperienced. We were 150 to 160 percent manned in 3-levels, but very sparsely manned in 5-levels and 7-levels. Our wings' are younger than ever before, so we must always put proper mission accomplishment, strong on-the-job-training, and safety at the forefront.

Road & Rec: Despite the many challenges, the past two years have been our safest on record in both flight and ground safety. What do you believe has led to that?

General Peppe: I think the leadership of the Air Force has talked about safety at great length. In USAFE, when we had an accident — be it a ground or flight mishap, we took a day off and talked about safety. That's a lot different from when I came into the Air Force. The leadership, in forcing people to think about safety, and the maturation of Operational Risk Management, has helped tremendously.

I think we're all more aware of safety and we're pushing it down to the lowest level. Our civilians and enlisted force are doing a superb job. I think all of those have combined to give us the great stats that we have now.

Road & Rec: You mentioned ORM, what role do you believe it has played in reducing our mishaps?

General Peppe: I think that by virtue of our teaching ORM in the officer and NCO schools, our having a web site that gets almost 8,000 hits a day, coming up with a program like TRACS (Total Risk Assessment and Control System) which will lead you through a risk management evaluation — these have all had the effect of making people think about the way they do business. We just need to get that down to the lowest, most junior level — the young 18, 19, and 20 year-old airman.

Road & Rec: What role does safety play in preserving our combat readiness, and what do we need to focus on the most?

General Peppe: We know that we are a smaller, leaner force than ever before. Therefore, every person has an important job to do. If they're not there for that job, it means those at work have to pick up the pace and do 105 percent.

Therefore, I think the most obvious thing is taking care of our people — whether they are on duty or off duty — and also taking care of their families. As commanders, I think we have a 24-hour-a-day responsibility. It's not only for the preservation of the individual and his or her ability to have a reasonable lifestyle, it's also the preservation of our combat capability and readiness.

The other issue, quite frankly, is the preservation of our materiel capability in terms of airplanes and vehicles. There is no 'free lunch' out there, we don't have all of the money we would like to have. Our airplanes and ground vehicles are all aging at a substantial rate. They're probably older than they've ever been in our Air Force's history.

Road & Rec: When you've finished your tenure here as Chief of Safety, what would you like to have accomplished?

General Peppe: I think the number one thing I would like to see is people becoming more aware of what the Air Force Safety Center is and what we try to do for the Air Force, its people, and mission. I want people to know that we're here and were ready to listen to their ideas. That's why I am going out and trying to talk to each of the MAJCOMs.

Even more importantly, in my personal opinion, is going to visit the people who do the work where the rubber meets the road — the wing safety shops. I want to know — how are they manned? How are they trained? What are they doing differently that works? What do they think we should change? I want them to know that if they have a good idea we will try to transform that into a reality for the entire force. ■

Letters to the Editor

Baby, Don't You Light My Fire!

Editor's Note: This was e-mailed to me by Jeff Short, a civilian employee with Headquarters, Department of Energy, Washington, D.C. He'd spotted this brief article written by a coworker in a DOE safety newsletter and felt it needed to be passed along. It makes an interesting point.

From the newsletter:

"While in travel status I took my laptop computer onto the airplane and stored it in the overhead bin. I had packed the spare battery in the outside folder of the nylon computer case along with my DOE badge with the metal neck chain. Unbeknownst to me, the chain (similar to a "dog tag" chain) came to rest balled up against the battery contacts and became very hot -- enough to turn the chain blue and melt a hole through the heavy nylon case.

"This could just as easily have ignited the papers that were also in the folder which, being in the overhead bin, would likely have gone unnoticed until it caused a fire at 35,000 feet. Not good!

"The moral of the story is to store your (spare) computer battery by itself and **NEVER** with anything metal. Now when I travel I put a piece of duct tape over the contacts."

Good point! Many of us travel packing a laptop with at least one spare battery. I had a similar experience (on a much smaller scale) when I dumped a 9-volt battery into my pocket along with my keys. It wasn't long before I noticed something was getting hot. I fished my keys and the battery out of my pocket and realized what was going on. However, that was nothing compared to a cabin fire onboard an aircraft at 35,000 feet! Thanks for alerting us to this danger.

The Editor

Microwave Water Woes

Editor's Note: This came in as an e-mail to Mr. Paul Carlisle of the Safety Center's Ground Safety division. The original e-mail, and Mr. Carlisle's answer, are very instructive. We've all heated water or other liquids in a microwave. This is a practice which, as it turns out, can be dangerous.

To Mr Carlisle:

"About five days ago my 26-year-old son decided to have a cup of instant coffee. He took a cup of water and put it in the microwave to heat it (something he had done numerous times before). I am not sure how long he set the timer for, but he told me he wanted to bring the water to a boil.

"When the timer shut off the oven, he removed the cup. As he looked into the cup, he noticed the water was not boiling. However, just then the cup blew up in his face. The cup had remained intact, but all of the water flew out into his face due to the buildup of energy.

"His entire face was blistered and he had first-and second-degree burns which may leave scarring. He may also lose partial sight in his left eye.

"While at the hospital, the doctor who was attending to him stated that this is a fairly common occurrence and that water (alone) should never be heated in a microwave oven. The doctor explained that if water is heated in this manner, then something such as a wooden stir stick, tea bag, etc., should be placed in the cup to diffuse the energy. He said it is a much safer choice to boil the water in a tea kettle."

Mr. Carlisle's Response:

"Microwave owner's manuals provide a caution/warning about heating liquids. I quote from our manual here at the Center:

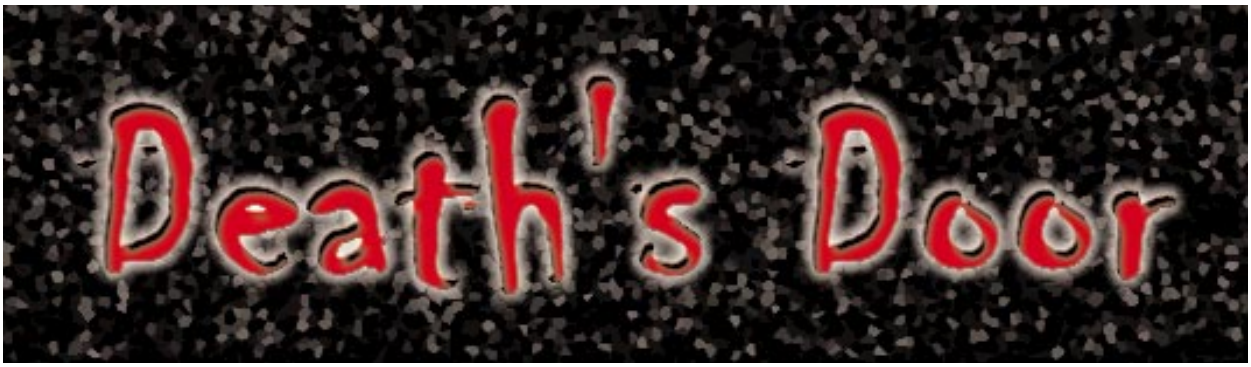
'WARNING: Liquids must be stirred briskly or poured (to mix in air) before being heated in a microwave oven. If air is not mixed into a liquid, the liquid can erupt in the oven or after removal from the oven.'

"Even after the heating cycle is complete, the product continues to cook due to heat transference from the 'cooking pot' to the cooking 'product' …

"Wood may work, but I would not recommend it since heating a combustible product (wood) in a heat-generating device -- such as a microwave -- could cause a fire. I'd recommend after the cooking cycle is complete, opening the microwave door and allowing one-to-two minutes of cooling time before handling the cup or removing it from the microwave."

Editor: Think this is a freak accident that couldn't happen to you? Check out this mishap narrative from earlier this year. The victim got 14 days' quarters.

"Participant was using a microwave oven to heat a cup of water in a Pyrex glass measuring bowl. He set the timer for five minutes then left to attend to other chores. After five minutes he removed the bowl from the oven and was about to set it down when the super-heated water erupted into spray and splashed up onto his face, neck and hands. Participant was transported to a local hospital where he was treated for second and third degree burns." ■



MR. LAWRENCE SIMEK
Courtesy ***Torch, Apr 00***

Complacency can prove deadly in the hangar.

I remember reading an article that told of a sergeant crushing her head in a hangar door. The article said that her coworkers could do nothing but stand there and watch her die. It seemed unbelievable at the time. But almost a year later, I witnessed another sergeant do the same thing and fully understood how helpless her coworkers must have felt.

As with all mishaps, there's a chain of events that must occur to bring about tragedy. In this case, there were several. First, the door controls had been wired illogically. That is, the left switch moved the hangar door to the right, and the right switch moved the door to the left. The doors were being repainted, and tape and paper covered the outside switches. Also, the doors were open about one foot — a real no-no.

The sergeant needed to bring a crane into the hangar, so he asked the painters if he could open the door. When they said yes, he reached through the opened doors and hit the switch farthest from him.

He lived for another 15 agonizing minutes.

The human skull is stronger than you would think. Huge hangar doors won't crush the skull — nature made it strong, and it flexes quite a lot. Unfortunately, the tissue under the skull, like the sinus cavities and temples, can't take this kind of pressure. When the sinuses rupture, it's impossible to stop the blood from flowing. Even if this happened in an operating room with the best doctors, you're certain to bleed to death.

The Fire Department had to be called to wash away all the blood. I now understand when historians write: "The streets were as a river of blood after the battle."

Everything happened so fast, I didn't have time to mourn. That lasted until a few days later when I went to get a condolence card for his family. As I looked for the best card, all I could think about was his wife and kids without him, and his mother and father not being able to see their son anymore. I'm sure I was a sight, biting down on my hand as hard as I could to keep from crying out in anguish.

He reached through the open doors and hit the switch... He lived for another 15 agonizing minutes.

As with most mishaps, this one would have been avoided had the rules been followed. Maintenance troops see the signs warning, "Hangar doors must be fully closed or opened not less than ten feet." But many ignore the warning and open the doors just enough to get through — especially when cold weather sets in and they want to keep in the heat.

As with most warnings, events have occurred in the past that led to the logic behind the warning. Hangar doors are definitely no exception.

If you haven't applied the Operational Risk Management formula to hangar doors, the process is long overdue. Take the time to talk about scenarios with hangar doors that might lead to an unnecessary, hazardous risk. Formulate a plan that helps reduce these risks and, ultimately, may help prevent another mishap.

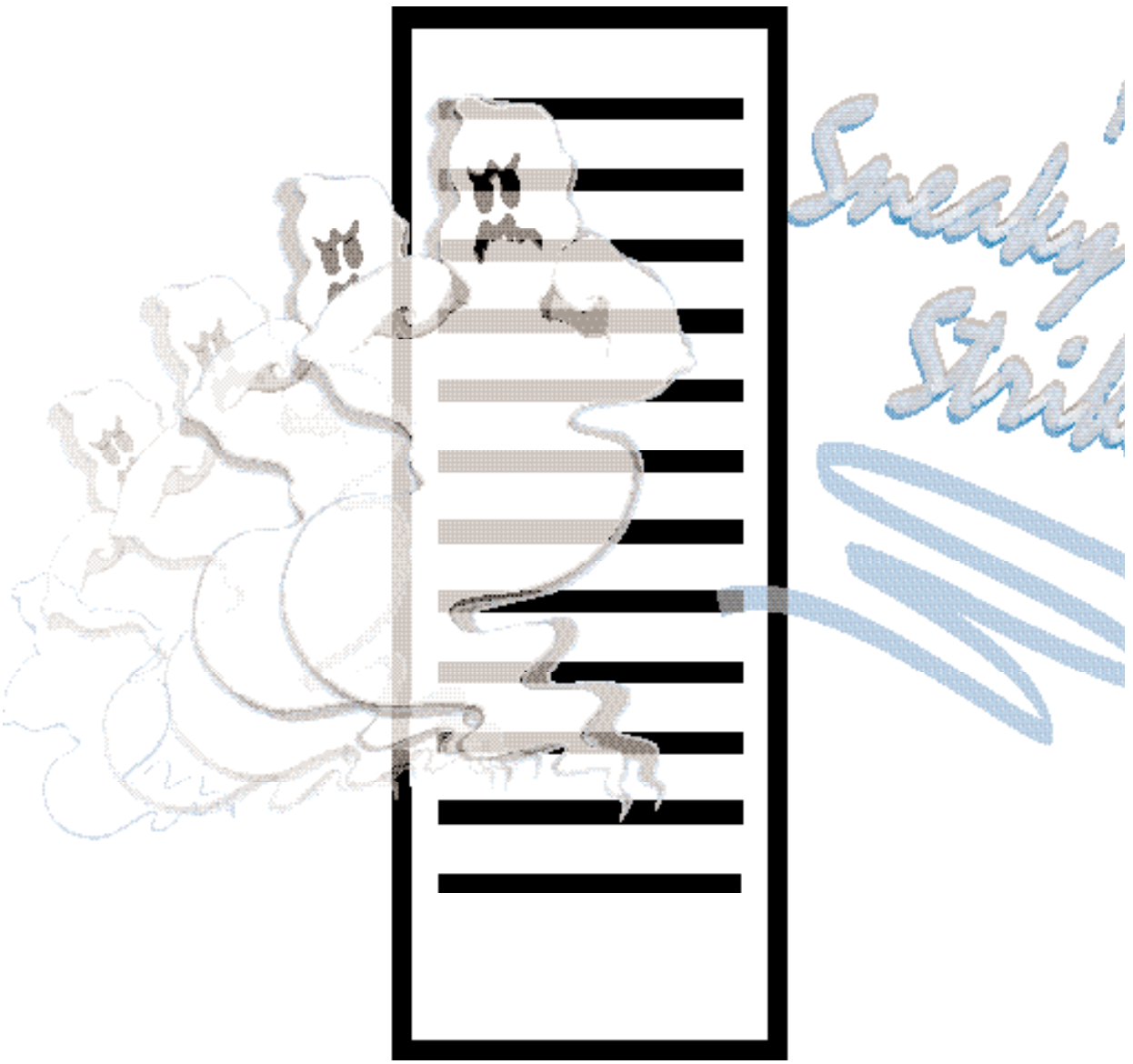
The bottom line is awareness and following the established safety guidelines.

The next time you see people opening hangar doors just enough to get their toolbox through, tell them for their own safety to follow the warning. If you are a supervisor, keep alert to the actions of your people. It's the little, seemingly unimportant things that can cause a lot of heartache and end with having to explain to families why they are now widows and orphans.

Don't let complacency be in your epitaph. ■

(Mr. Simek is with the 325th Logistics Support Squadron at Tyndall AFB, FL.)

(*AFOSHSTD 91-100, Aircraft Flightline Ground Operations and Activities,* contains a section entitled *"Hangar, Nose Dock, and Shelter Door Design Guidance and Operations."* It provides basic Air Force policies for hangar door operation. It's also likely your unit has established local Operating Instructions to govern hangar door operations. If you're not sure what the local policies are, Quality Assurance should be able to help. Ed.)



Courtesy ***Safety Times***

Gordon had been suffering from headaches for several months. He was sleeping more than usual, and taking six aspirins a day. He felt sluggish much of the time. Oddly, when his daughter came to visit, his headaches became contagious and she got them, too.

At the same time, Gordon noticed his furnace was not producing sufficient heat and he called a repairman. The repairman immediately found a carbon monoxide leak, and told Gordon he was lucky to be alive.

A Sneaky Killer

Last year approximately 250 Americans died from carbon monoxide (CO) poisoning. Many died because their fuel burning appliances weren't operating properly and produced fatal concentrations of CO. Because this can happen with very little warning, we need to be especially alert.

Where It Comes From

The most common source of dangerous CO

levels in homes is an improperly maintained furnace. Have a qualified service person inspect all fuel-burning appliances annually in your home, trailer, camper or vacation site. This includes heating systems, water heaters, kitchen stoves and fireplaces.

Precautions

◆ Buy only appliances that display the mark of a recognized testing agency, such as the American Gas Association, or the Underwriters Laboratories (UL) label.

◆ Have a professional install all fuel-burning appliances.

◆ Check your furnace filter monthly during the heating season to make sure it hasn't become clogged. Clean or replace the filter as needed.

◆ Make sure burner flames on furnaces and stoves are blue, burn evenly and have a uniform shape. Flames with yellow tips and poorly defined edges indicate incomplete combustion.

◆ No matter how cold it is, do not warm up your car with the garage door closed.

◆ Do not work in a closed garage with the car engine running.

◆ Never use charcoal for heating or cooking inside a house or other enclosed space.

◆ Use kerosene heaters only in well-ventilated rooms. Open a window in the house.

◆ Don't use the oven to heat your kitchen.

◆ Problems suggesting improper appliance operation include:

- decreasing hot water supply;
- furnace unable to heat house or runs constantly;
- unfamiliar or burning odor;
- rusting or water streaking on vent or chimney;
- loose or disconnected vent or chimney connections;
- loose or missing furnace panels;
- debris or soot falling from chimney, fireplace, or appliances;
- loose masonry on chimney;
- moisture on inside windows may indicate backdrafting.

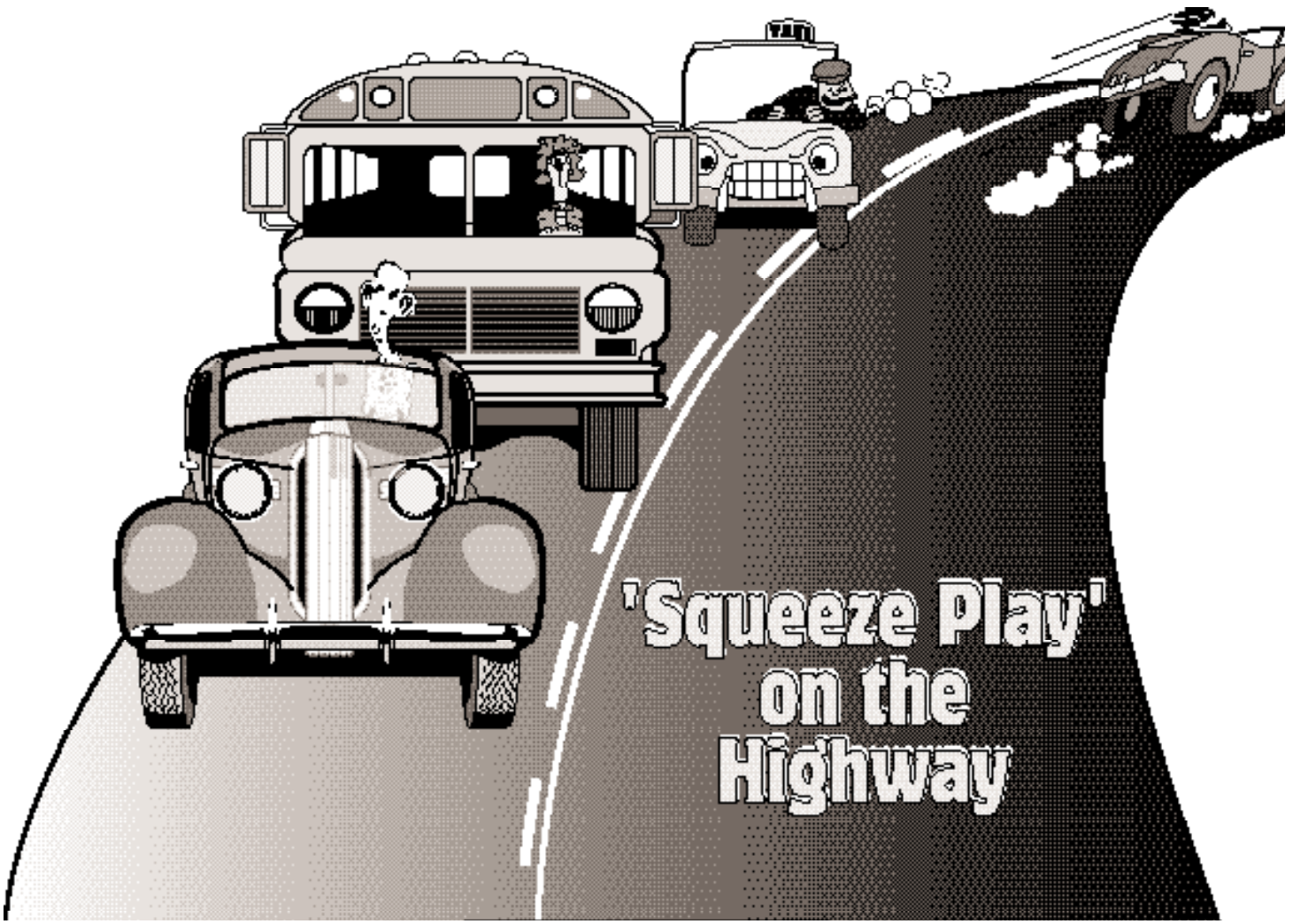
Early Detection

Symptoms of carbon monoxide poisoning are similar to those of the flu except there is no fever. Symptoms include dizziness, fatigue, headache, nausea, and irregular breathing. Your vision may become blurry and your reflexes may become slowed. Some people report a feeling of tightness across their chest.

If you have any of these symptoms while you're inside your home and find that you feel better when you go outside, you may be suffering from CO poisoning. Get a blood test to be sure.

The Consumer Product Safety Commission suggests at least one carbon monoxide detector with an audible alarm be installed near your bedroom. For added protection, place a detector on every level in your home and outside of individual bedrooms.

Detectors provide early warning before the deadly gas builds up to dangerous levels. Plug-in and corded 120-volt alarms have proven most effective. Battery-operated models can be placed in locations that are too far away from an electrical outlet. Be sure your detectors have the UL label. ■

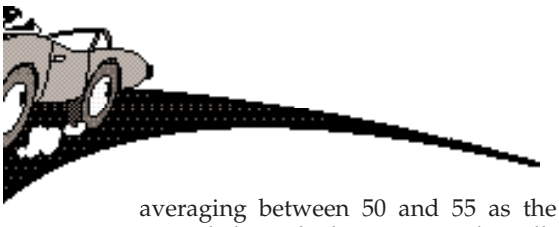


BOB VAN ELSBERG
Managing Editor

Every so often I read a mishap report that stands out as a collection of bad decisions. Decisions driven, more often than not, out of impatience or the urge to hurry more than is prudent or safe. Here's a recent example. I have used fictional names and vehicle descriptions to make the story easier to read. However, this accident happened and, like so many, could have been prevented.

It was about 2 p.m. Sunday afternoon, April 16, and A1C Susan Morris, driving her blue Toyota Corolla, was anxious to get up to Greenville, N.C. For a young airman stationed at Seymour Johnson AFB, Greenville was ***the*** place to go for some "big city" fun. It was about a 35-mile drive, the first 18 or 19 being on Highway 13, a single lane country highway with a posted speed limit of 55 mph. Broken double yellow lines allowed drivers to pass, giving them relief from slow-moving farm vehicles and elderly drivers who often impeded traffic. The drive through the peaceful farm country was scenic -- even serene -- for those who took the time to enjoy it.

Being a Sunday afternoon, traffic was relatively light. Bill, a civilian driver, was also headed north on Highway 13 in his brown Chevy four door sedan. Ahead of him was an older couple in a pickup. Like many older motorists, the man was driving cautiously,



averaging between 50 and 55 as the road curved through the countryside. Bill hated being delayed, especially when he could do 60 mph without worrying about being ticketed. Also, he had an impatient driver gaining on his back bumper -- a girl in a blue Toyota who seemed as anxious as he to pick up the pace.

Bill eased to the left in his lane and scanned the road ahead. It stretched out straight for about a half-mile then curved to the left. The oncoming lane was clear and, since it was legal to pass, he moved into the oncoming lane and began to accelerate. No need to jump on the gas, however. It wasn't like the elderly driver was going to race him.

As Bill pulled even with the pickup he glanced over at the driver. It was basically a habit -- sizing up the other motorist. But the older man didn't even look back. Not much to figure on there.

Bill needed to finish passing and get back into his lane. As he looked ahead, however, he gasped. While he'd been distracted, a car had rounded the curve and was coming straight at him! Glancing at the pickup still beside him and at the space ahead, he knew he didn't have enough time to finish passing. Fixated on the onrushing car, Bill pulled his foot off the gas and began to brake. As soon as he dropped behind the pickup, Bill turned the wheel to the right to get back into his lane. But somebody was already there!

Susan had seen Bill pull into the oncoming lane moments before and had accelerated to take his place behind the pickup. With a little luck, she, like Bill, could get around the pickup before the three vehicles reached the curve ahead. But today, her luck ran out.

The red glare of Bill's brake lights flashed a split-second before the big Chevy swerved back into the lane in front of Susan. The few feet between the vehicles disappeared instantly as Bill rapidly slowed down and Susan frantically jumped on her brakes. But just as there wasn't enough time or space for Bill to pass, there wasn't enough time or space for Susan to slow down. As she locked up all four wheels, her Toyota slammed into the back of Bill's Chevy. The impact first threw Susan forward into her shoulder strap, then slammed her head backwards. In the Chevy, Bill had the opposite experience as the Toyota rear-ended him. Fortunately, neither car slid out of control and, although shaken, both drivers were able to pull off the road and onto the shoulder. Up ahead, the pickup disappeared into the distance, its driver either unaware of the accident that had just happened just behind him or else not wanting to get involved. In a moment of impatience, two vehicles tried to fit in a space only large enough for one. Both paid the price.

Despite the harrowing experience, the injuries, fortunately, were minor. For her role in this highway "squeeze play," Susan would spend two days on quarters and several more in pain from the whiplash she'd suffered. In retrospect, she and Bill both got off lightly -- it could have been MUCH worse.

What lessons are there to learn from Bill and Susan's experience? There are basically three:

Always expect the unexpected! If you want to pass a vehicle and there is a curve ahead, automatically expect someone to be coming around it. Ask yourself, "Do I have enough time to pass in a worst-case scenario?" Also, take a look in the rearview mirror. Can you fall back into your lane or is there a "speedy Susan" waiting to cut off your escape route?

Space is life -- maybe YOURS! If you're "Susan" in a passing situation, don't roar up behind the vehicle being passed. Not only is tailgating dangerous, if you're on a two-lane road as in the story above, you may suddenly find yourself in the way of a "Bill" trying to avoid a head-on collision. Don't compound "Bill's" problems by forcing him to hit you or run you off the road to save himself. You don't want to meet Bill that way.

Why hurry to an early grave? No matter how much of a rush you may ***think*** you're in, arriving late at your destination ALWAYS beats arriving "on time" at the morgue. Bill and Susan are lucky to be alive -- but luck is a poor substitute for "safe." Like they say, "Haste makes waste." Do you really want to let haste "waste" you? ■

A LITTLE SOUND ADVICE

Courtesy ***Safety Times*** Photos by Robert Van Elsberg

Suzy loved her compact car. It was easy to maintain, efficient, and very maneuverable. It was small, like her. She could settle into the driver's seat and feel the little car almost wrap around her. She felt in total control. When she hit a pool of water one fall morning, however, she lost control. The car turned over, rolled three times and pinned Suzy to the steering wheel, inflicting fatal injuries on the young woman. The strengths of her little car had become its greatest weakness.

There are many reasons people buy small cars. For all their advantages, however, small cars generally absorb more force in a collision than a heavier car. According to the Insurance Institute for Highway Safety, people in small cars are injured more often and more severely than those in larger vehicles. Still, like Suzy, many of us maintain our love affairs with our small cars. The challenge for drivers is to make up in safety awareness what their vehicle may lack in size and weight.

See And Be Seen

In a small car, you are sitting as much as nine inches lower than the driver of a large car. Barriers, medians, curbs, guardrails, and roadway obstacles may make it harder for you to see and be seen. Most accidents involving small cars occur because drivers of larger vehicles have trouble seeing smaller cars. Here are a few suggestions to help you compensate for your size disadvantage:

◆ Realize that because you are closer to the ground, your range of vision is limited. You will also catch more

glare off the road at night and in wet weather. Use caution and be careful about those things you cannot see. If your vision is restricted in any way, slow down!

◆ Leave a "cushion of space" between you and other vehicles. Your purpose is to defend yourself from the dangers around you.

◆ Be aware that the bumpers on many small vehicles are lower than those of pickup trucks and sport utility vehicles. This "bumper mismatch" -- as it is called -- can place you at a big disadvantage in a collision.

◆ Drive with your lights on during the daylight hours, especially in inclement weather.

◆ Do not drive alongside or behind larger vehicles. You are likely to fall into one of their blind spots.

◆ Try to keep your car where it is visible in the rearview mirror of the car ahead of you.

◆ Keep in mind that dark colors, such as black, dark green, or brown, are less visible than bright colors.

◆ If you think a larger vehicle does not see you, flash your headlights on and off, or honk your horn.

You Win With Defense

◆ When purchasing a car, pay special attention to safety features.

◆ Always wear your safety belt. According to the National Safety Council, lap and shoulder belts reduce the risk of fatal injury to front seat passengers by 45 percent, and the risk of moderate-to-critical injury by 50 percent.

◆ Do not drive aggressively. Resist the temptation to weave or slip through tight spaces, even if you think you can.

◆ Sudden changes in wind velocity or direction can greatly affect your control of a small car. Such changes can occur when you're being passed by a larger vehicle, or when you're driving on a stretch of highway open to wind gusts. Grip the steering wheel at the 9 and 3 o'clock positions and move to the far side of your lane, away from larger vehicles.

◆ Use the side and rearview mirrors constantly. Know what is behind, beside, and ahead of your car at all times.

Highway Tips

Most small cars do not have the engine power of larger vehicles and most highways in the United States have been engineered for larger, more powerful cars. With that in mind:

◆ Small cars must accelerate rapidly on the entrance ramp to a highway. Don't wait until you reach the expressway.

◆ For the same reason, allow plenty of distance and time when passing a vehicle or merging. ■

Crash to Test --
How Good Are the New Small Cars?

INSURANCE INSTITUTE FOR HIGHWAY SAFETY

Editor's Note: *Periodically we publish the results of the Insurance Institute for Highway Safety's crash tests. The Institute's offset frontal crash test simulates two identical vehicles striking each other head-on at 40 mph with the impact focused on the driver's side of the bumper. While these tests don't necessarily imitate exactly what might happen in a car crash, they do allow vehicles of a given class to be compared on some key safety issues. Those issues are described in the paragraph below. Note: Any comments by the editor added to the Institute's actual report will be set off in italics. Also, the information below should not be construed as Air Force endorsement or criticism of any of the vehicles tested.*

Crashworthiness Performance

Three aspects of crashworthiness are assessed in the Institute's 40 mph frontal offset crash test: how well each vehicle's front end manages crash energy to limit occupant compartment intrusion, injury risk measured on an average-size male Hybrid III dummy in the driver seat, and how well the belt and airbag perform and interact with the steering column and other vehicle parts to control dummy kinematics (movement).

Volkswagen New Beetle 1998-2000 -- Overall Rating: Good

Reincarnated for the 1998 model year, the Volkswagen New Beetle has side airbags for both the driver and passenger plus dual-locking shoulder belts. Front-seat shoulder belts include crash tensioners to prevent slack from allowing excessive forward movement in a crash, and devices to limit belt forces on occupants. Antilock brakes were optional on 1998 models, but became standard beginning with ***the*** 1999s.

(**NOTE:** Following discussion about restraint system performance in an initial offset test, Volkswagen changed the size of the airbag vent hole. Cars manufactured after June 1998 are equipped with the new airbag design. Information about when a specific vehicle was manufactured is on the certification label typically affixed to the car on or near the driver door.) The

Photos courtesy of the ***Insurance Institute for Highway Safety***

Institute conducted a second crash test using a new Beetle equipped with the revised airbag. This evaluation covers both tests. Ratings are based on the second test.

STRUCTURE/SAFETY CAGE: GOOD

There was minimal intrusion in the driver footwell area and minimal rearward movement of the instrument panel in both tests.

RESTRAINTS/DUMMY KINEMATICS: ACCEPTABLE

In both tests, the dummy's head bottomed out the airbag as the car rebounded from the barrier. In the second test, the dummy's head brushed the window sill as it rebounded toward the driver seat. Otherwise, dummy movement was controlled reasonably well.

INJURY MEASURES: GOOD

Measures taken from the neck, chest, and both legs indicated a low risk of injury to these body regions. High head acceleration occurred when the dummy's head hit the steering wheel in the first test (rated acceptable), but acceleration was low in the second test with the modified airbag.

OVERALL EVALUATION: GOOD

The driver space was maintained well in both frontal offset crash tests. Although measures in the first test indicated the possibility of a minor head injury, the redesigned airbag in the second test reduced this risk. Side airbags, belt crash tensioners, and daytime running lights are pluses.

Volkswagen New Jetta/Gulf 1999-2000 -- Overall Rating: Acceptable

Redesigned during the 1999 model year (the old design continued into the early part of this model year), the Volkswagen New Jetta has front and side airbags for both ***the*** driver and passenger plus dual-locking shoulder belts. Front-seat shoulder belts include crash tensioners to prevent slack from allowing excessive forward movement in a crash, and devices to limit belt forces on occupants. Antilock brakes and daytime running lights are standard.

(Note: Immediately after the test there was a small fire at the base of the B-pillar ***(the B-pillar is the roof support immediately behind the front door on either side of the vehicle).*** The pyrotechnic device in the belt tensioner had ignited sound insulation material. Soon after this incident, the manufacturer recalled all 1999 Jetta/Gulf models to fix this problem, so it doesn't affect the crashworthiness evaluation.

STRUCTURE/SAFETY CAGE: ACCEPTABLE

There was minimal-to-moderate intrusion into the driver footwell area, and moderate rearward movement of the instrument panel.

RESTRAINTS/DUMMY KINEMATICS: ACCEPTABLE

Dummy movement was controlled reasonably well. However, the dummy's head bottomed out the airbag and contacted the steering wheel. During rebound, the dummy moved toward the driver door and its head contacted the B-pillar.

INJURY MEASURES: LEFT LEG ACCEPTABLE

Measures taken from the head, neck and chest indicated a low risk of injury to these body regions. Head accelerations from the steering wheel and B-pillar contacts were low. However, forces on the left tibia indicated the possibility of lower leg injury.

OVERALL EVALUATION: ACCEPTABLE

The driver space was maintained reasonably well in the frontal offset crash test. However, footwell intrusion contributed to the possibility of a lower leg injury. Side airbags, belt crash tensioners, and daytime running lights are pluses.

Honda Civic 1996-2000 -- Overall Rating: Acceptable

Redesigned for the 1996 model year, the Honda Civic has front airbags plus dual-locking shoulder belts. Front-seat shoulder belts include webbing grabbers designed to prevent belt slack on the storage wheel from allowing excessive forward movement in a crash. Antilock brakes are optional.

STRUCTURE/SAFETY CAGE: ACCEPTABLE

There was moderate intrusion in the driver footwell area and minimal-to-moderate rearward movement of the instrument panel.

RESTRAINT/DUMMY KINEMATICS: GOOD

Dummy movement was well-controlled, although the dummy's head did contact the B-pillar during rebound.

INJURY MEASURES: ACCEPTABLE

Measures taken from the head and neck during the offset test indicated a low risk of injury to these body regions. Head acceleration from the B-pillar was low.

continued on next page

Chest compression indicated the possibility of a chest injury. Forces on the left tibia indicated the possibility of lower leg injury.

OVERALL EVALUATION: ACCEPTABLE

The driver space was maintained reasonably well in the frontal offset crash. However, measures indicated the possibility of injury to the chest and left leg.

Toyota Corolla/Chevrolet Prizm 1998-2000 -- Overall Rating: Acceptable

Redesigned for the 1998 model year, the Toyota Corolla has front airbags plus dual-locking shoulder belts. Front-seat shoulder belts include crash tensioners designed to prevent slack from allowing excessive forward movement in a crash, and devices to limit belt forces on occupants. Daytime running lights are standard. Antilock brakes, built-in child restraints, and side airbags are optional.

STRUCTURE/SAFETY CAGE: ACCEPTABLE

There was minimal-to-moderate intrusion into the driver footwell area and moderate rearward movement of the instrument panel.

RESTRAINTS/DUMMY KINEMATICS: MARGINAL

After the dummy moved forward into the airbag, its head leaned left through the open window. During rebound, the dummy's head contacted the B-pillar. There was too much upward movement of the steering column, which could compromise restraint system performance in other crashes.

INJURY MEASURES -- LEFT LEG: MARGINAL

Measures taken from the head, neck, and chest indicated a low risk of injury to these body regions. Head acceleration from the B-pillar contact was too low to record. Forces on the left tibia indicated the possibility of a lower leg injury.

OVERALL EVALUATION: ACCEPTABLE

The driver space was maintained reasonably well in the frontal offset crash test. However, measures indicated the possibility of injury to the left leg. Optional side airbags, belt crash tensioners and daytime running lights are pluses.

Hyundai Elantra 1996-2000 -- Overall Rating: Acceptable

Redesigned for the 1996 model year (bumpers improved beginning with 1999 models), the Hyundai Elantra has front airbags plus dual-locking shoulder belts. Beginning with the 1999 models, front-seat shoulder belts include crash tensioners to prevent slack from allowing excessive forward movement in a crash. Antilock brakes are optional

STRUCTURE/SAFETY CAGE: ACCEPTABLE

There was minimal-to-moderate intrusion into the driver footwell area and moderate rearward movement of the instrument panel.

RESTRAINT/DUMMY KINEMATICS: ACCEPTABLE

After the dummy moved forward into the airbag, it moved toward the driver door, which had bowed outward. During rebound ***the dummy's*** head hit the B-pillar.

INJURY MEASURES: ACCEPTABLE

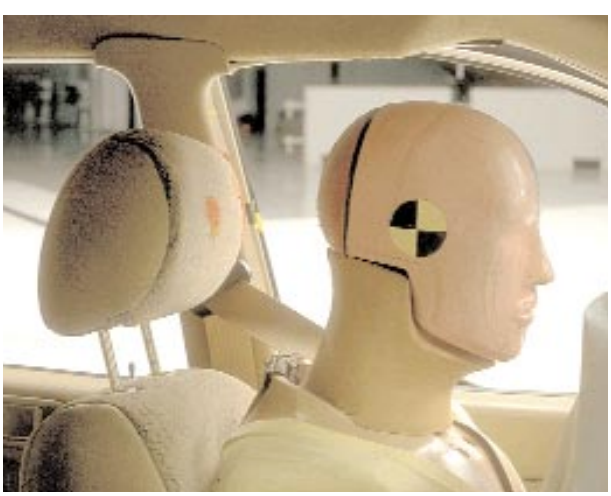
High head acceleration occurred when the dummy's head hit the B-pillar, which indicated the possibility of a head injury. The right tibia/femur displacement indicated the possibility of injury to the knee joint.

OVERALL EVALUATION: ACCEPTABLE

The driver space was maintained reasonably well in the frontal offset crash test. However, measures indicated the possibility of injury to the head and knee. Belt crash tensioners are a plus.

Ford Escort/Mercury Tracer 1997-2000 -- Overall Rating: Acceptable

Redesigned for the 1997 model year, the Ford Escort has front airbags plus dual-locking shoulder belts. Front-seat shoulder belts include webbing grabbers designed to prevent belt slack on the storage wheel from allowing excessive forward movement in a crash. Built-in child restraints are optional in 1998 and earlier models. Antilock brakes are optional.



Even in the highest position, the head restraint isn't high enough to effectively protect an average-size male.

STRUCTURE/SAFETY CAGE: ACCEPTABLE

There was moderate intrusion into the driver footwell area and minimal-to-moderate rearward movement of the instrument panel.

RESTRAINTS/DUMMY KINEMATICS: GOOD

Dummy movement was well-controlled, although the dummy's head did contact the B-pillar during rebound.

INJURY MEASURES -- RIGHT LEG: POOR

Measures taken from the head, neck, and chest indicated a low risk of injury to these body regions. Head acceleration from the B-pillar contact was low. Forces on the right tibia indicated the likelihood of lower leg injury.

OVERALL EVALUATION: ACCEPTABLE

The driver space was maintained reasonably well in the frontal offset crash test. However, intrusion into the footwell area contributed to poor right leg injury results.

Saturn SL 1995-2000 -- Overall Rating: Acceptable

Introduced in the 1991 model year, the Saturn SL has front airbags (standard beginning in 1995) plus dual-locking shoulder belts. Daytime running lights became standard beginning with the 1996 models, and antilock brakes are optional.

STRUCTURE/SAFETY CAGE: ACCEPTABLE

There was minimal-to-moderate intrusion into the driver footwell area and moderate rearward movement of the instrument panel.

RESTRAINTS/DUMMY KINEMATICS: MARGINAL

After the dummy moved forward into the airbag, it moved down and toward the driver door. During rebound, the dummy's head contacted the window frame and B-pillar. There was too much rearward movement of the steering column, which could compromise restraint system performance in other crashes.

INJURY MEASURES: ACCEPTABLE

Measures taken from the head and neck indicated a low risk of injury to these body regions. Head accelerations from the window frame and B-pillar were low. Chest compression indicated the possibility of a chest injury. Forces on the left femur indicated the possibility of injury to the upper leg or pelvis.

OVERALL EVALUATION: ACCEPTABLE

The driver space was maintained reasonably well in the frontal offset crash test. However, there was too much steering column movement, and measures indicated the possibility of injury to the chest and left leg. Daytime running lights are a plus.

Nissan Sentra 1998-1999 -- Overall Rating: Acceptable

Redesigned in the 1995 model year and structurally modified beginning with the 1998 models to improve occupant protection in offset crashes, the Nissan Sentra has front airbags plus dual-locking shoulder belts. Front-seat shoulder belts include webbing grabbers designed to prevent belt slack on the storage reel from allowing excessive forward movement in a crash. Antilock brakes are optional.

STRUCTURE/SAFETY CAGE: MARGINAL

There was moderate intrusion into the driver footwell area and minimal-to-moderate rearward movement of the instrument panel. The dummy's right foot was trapped between the intruded toepan and a bracket in front of the center console.

The Sentra's occupant compartment did not protect the dummy's left leg or right foot well during the tests.

RESTRAINTS/DUMMY KINEMATICS: ACCEPTABLE

After the dummy moved forward into the airbag, it moved toward the driver door and its head went through the open window. During rebound, the dummy's head hit the B-pillar.

INJURY MEASURES -- LEFT LEG: MARGINAL

High head acceleration occurred when the dummy's head hit the B-pillar and indicated the possibility of a head injury. The left tibia/femur displacement indicated the possibility of injury to the knee joint. Forces on the left tibia indicated the possibility of a lower leg injury.

OVERALL EVALUATION: ACCEPTABLE

The driver space was maintained reasonably well in the frontal offset crash test. However, intrusion trapped the dummy's right foot, and measures indicated the possibility of injury to the head, left knee and left leg.

Mazda Protege 1999-2000 -- Rating: Acceptable

Redesigned for the 1999 model year, the Mazda Protege has front airbags plus dual-locking shoulder

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belts. Front-seat shoulder belts include devices to limit belt forces on occupants. Antilock brakes are optional.

STRUCTURE/SAFETY CAGE: ACCEPTABLE

There was moderate intrusion into the driver footwell area and minimal-to-moderate rearward movement of the instrument panel.

RESTRAINTS/DUMMY KINEMATICS: ACCEPTABLE

Dummy movement was reasonably well controlled. During rebound, the dummy moved toward the driver's door. Its head went part of the way out of the window and approached, but didn't contact, the window frame.

INJURY MEASURES -- RIGHT LEG: POOR

Measures taken from the head, neck and chest indicated low risk of injury to these body regions. However, forces on the lower legs indicated the likelihood of a right leg injury and the possibility of injury to the left leg.

OVERALL EVALUATION: ACCEPTABLE

Structural performance in the frontal offset crash was very similar to the performance of the predecessor Protege model. The driver space was maintained reasonably well. However, footwell intrusion contributed to the likelihood of lower leg injury.

Dodge/Plymouth Neon 2000 -- Overall Rating: Marginal

Redesigned for the 2000 model year, the Dodge Neon has front airbags plus dual-locking shoulder belts in the front seats. Front-seat shoulder belts also include devices to limit belt forces on occupants. Antilock brakes are optional.

STRUCTURE/SAFETY CAGE: MARGINAL

There was moderate intrusion into the driver footwell area and moderate rearward movement of the instrument panel.

RESTRAINTS/DUMMY KINEMATICS: MARGINAL

Dummy movement wasn't well controlled. As the dummy moved into the airbag, it also moved toward the driver's door, which had bowed outward. The dummy's head approached but didn't hit the window sill. There was too much rearward movement of the steering column and during the impact the steering wheel broke off from the column.

INJURY MEASURES -- LEFT LEG: POOR

Measures taken from the head, neck and chest indicated a low risk of injury to these body regions. However, sustained forces on the left femur indicated the likelihood of upper leg or pelvis injury. Forces on the left and right tibias indicated the possibility of lower leg injuries.

OVERALL EVALUATION: MARGINAL

The redesigned Neon showed only a slight improvement compared to the performance of the predecessor model. There was somewhat less intrusion, but the driver space still wasn't maintained well. Footwell and instrument panel intrusion contributed to the likelihood of injuries to the upper left leg.

Although redesigned since the Institute's previous series of crash tests, the Neon still failed to do a good job of protecting its driver.

Mitsubishi Mirage 1997-2000 -- Overall Rating: Poor

Redesigned for the 1997 model year, the Mitsubishi Mirage has front airbags plus dual-locking shoulder belts. Antilock brakes are optional.

STRUCTURE/SAFETY CAGE: MARGINAL

There was moderate-to-major intrusion into the driver footwell area and moderate rearward movement of the instrument panel.

RESTRAINTS/DUMMY KINEMATICS: POOR

Dummy movement wasn't well controlled. There was too much upward movement of the steering column, which contributed to the dummy's head bottoming out the airbag and striking the steering wheel. During rebound, the dummy moved toward the driver's door -- which had bowed outward -- and its head hit the B-pillar.

INJURY MEASURES -- RIGHT LEG: POOR

High head accelerations occurred when the dummy's head hit the steering wheel and B-pillar, indicating the possibility of a head injury. Forces on the right tibia and a high right foot acceleration indicated the likelihood of injury to the lower leg or foot.

OVERALL EVALUATION: POOR

The driver space wasn't maintained well in the frontal offset crash test. Intrusion into the footwell area contributed to poor right leg injury results. There was too much steering column movement, and the dummy's head hit the steering wheel through the airbag.

Crash testing indicated a high probability of a driver head injury in the Sephia. ▶

Kia Sephia 1998-2000 -- Overall Rating: Poor

Redesigned for the 1998 model year, the Kia Sephia has front airbags plus dual-locking shoulder belts. Antilock brakes are optional.

STRUCTURE/SAFETY CAGE: MARGINAL

There was moderate-to-major intrusion into the driver footwell area and moderate rearward movement of the instrument panel.

RESTRAINTS/DUMMY KINEMATICS: MARGINAL

Dummy movement wasn't well controlled. During rebound, the dummy moved toward the driver door. ***The dummy's*** head went part of the way out of the open window and hit the B-pillar. There was also too much upward movement of the steering column, which could compromise restraint system performance in other crashes.

INJURY MEASURES: HEAD/NECK -- POOR; LEFT AND RIGHT LEGS: MARGINAL

A high head injury criterion occurred during the dummy's interaction with the airbag. Because the airbag distributed the forces across the dummy's head, the high result may not indicate a major injury such as a skull fracture, but a serious head injury is possible. A high head acceleration also occurred during rebound when the dummy's head hit the B-pillar, indicating the possibility of another head injury. Forces on both tibias indicated the possibility of lower leg injuries.

OVERALL EVALUATION: POOR

The structural performance of the new Sephia was somewhat better than its predecessor model's in the frontal offset crash test, but the driver space still wasn't maintained well. Measures indicated the likelihood of head injuries, and intrusion into the driver footwell area contributed to the possibility of leg injuries. ■

CURRENT MODELS Vehicle Make & Model Model Year(s) Test Vehicle Weight	Overall	Structure/ Safety Cage	Injury Measures: Head/ Neck	Injury Measures: Chest	Injury Measures: Leg/Foot Left, Right	Restrained dummy kinematics	Other Evaluations: Head restraint design	Other Evaluations: Bumper
Legend: G = Good, A = Acceptable, M = Marginal, P = Poor								
FRONTAL OFFSET CRASH TEST PERFORMANCE							OTHER EVALUATIONS	
VOLKSWAGEN NEW BEETLE 1998-1999 Models 2,768 lbs.	G	G	G	G	G	A	G/A[1]	G
VOLKSWAGEN NEW JETTA/GOLF 1999-2000 Models 3,402 lbs.	A	A	G	G	A/G	A	M[1]/P	G
HONDA CIVIC 1999-2000 Models 2,416 lbs.	A	A	G	A	A/G	G	P	A
TOYOTA COROLLA/ CHEVROLET PRIZM 1998-2000 Models 2,994 lbs.	A	A	G	G	M/G	M	A	G
HYUNDAI ELANTRA 1996-2000 Models 2,943 lbs.	A	A	A	G	G/A	A	A	A[2]/P
FORD ESCORT/ MERCURY TRACER 1997-2000 Models 2,643 lbs.	A	A	G	G	G/P	G	P	A
SATURN SL 1992-2000 Models 2,494 lbs.	A	A	G	A	A/G	M	P	G
NISSAN SENTRA 1998-1999 Models 2,920 lbs.	A	M	A	G	M/G	A	M	G
MAZDA PROTEGE 1998-2000 Models 2,977 lbs.	A	A	G	G	M/P	A	M	M[2]/P
DODGE/PLYMOUTH NEON 2000 Models 2,999 lbs.	M	M	G	G	P/A	M	P	A
MITSUBISHI MIRAGE 1997-2000 Models 2,497 lbs.	P	M	A	G	G/P	P	A	M
KIA SEPHIA 1998-2000 Models 2,923 lbs.	P	M	P	G	M	M	A/M	M

1. Depends on seat
2. Depends on model year

Child Safety Takes a Backseat!

Photo by MSgt Perry Heimer

BARBARA BOOTH
Wisconsin Department of Transportation
Regional Program Manager
Bureau of Transportation Safety

It was a cold, snowy day in Idaho. My husband, our two children and I were traveling along a slippery mountain highway when the tires hit an icy patch, sending our vehicle over a gravel shoulder and rolling down an embankment. When we stopped, both children were upside down, hanging safely from their child safety seats. That day our vehicle was crushed, but our lives were saved because we had worn our seat belts and used our child safety seats.

That leads to a question: Are you among the 10 percent of parents who buckle-up their children correctly? At a recent Child Car Seat Checkup I attended, nearly 90 percent of the children were improperly restrained. The most common problems were child safety seats that were too loose or facing in the wrong direction. In some cases, the seats were the wrong size for the children.

Most parents want to keep their kids safe, however, it is difficult to know just how to install a child car seat. Vehicles and child safety seats aren't always compatible, especially those vehicles which have captain's chairs or bucket seats -- such as many minivans -- for the passengers in the back. Also, many passenger car backseats are not designed to allow a child safety seat to be effectively secured. However, changes during the next few years will mean that child safety seats and car seats will be more compatible. In the meantime you need to be well-educated.

What should you know?

❑ The backseat is the safest seat for any passenger under the age of 13.

❑ All infants less than one year old should be in a rear-facing child safety seat firmly installed in the vehicle's backseat. Even if the child weighs 20 pounds before it is one year old, its neck is still not developed enough to support its head in a crash. If you have an airbag, it is especially important that a child NOT be placed in the front seat. Infant fatalities have been reported by truck owners and others who've had children in the front seat when the airbags deployed.

❑ Straps on a convertible child car seat should be in the highest position when you use the seat facing forward. This allows the reinforced steel bar in the seat to provide added protection in a crash.

❑ The child safety seat should not move when it is properly installed. Put your knee in the seat, then put all of your weight on it as you pull the vehicle's seat belt to tighten the safety seat in-place.

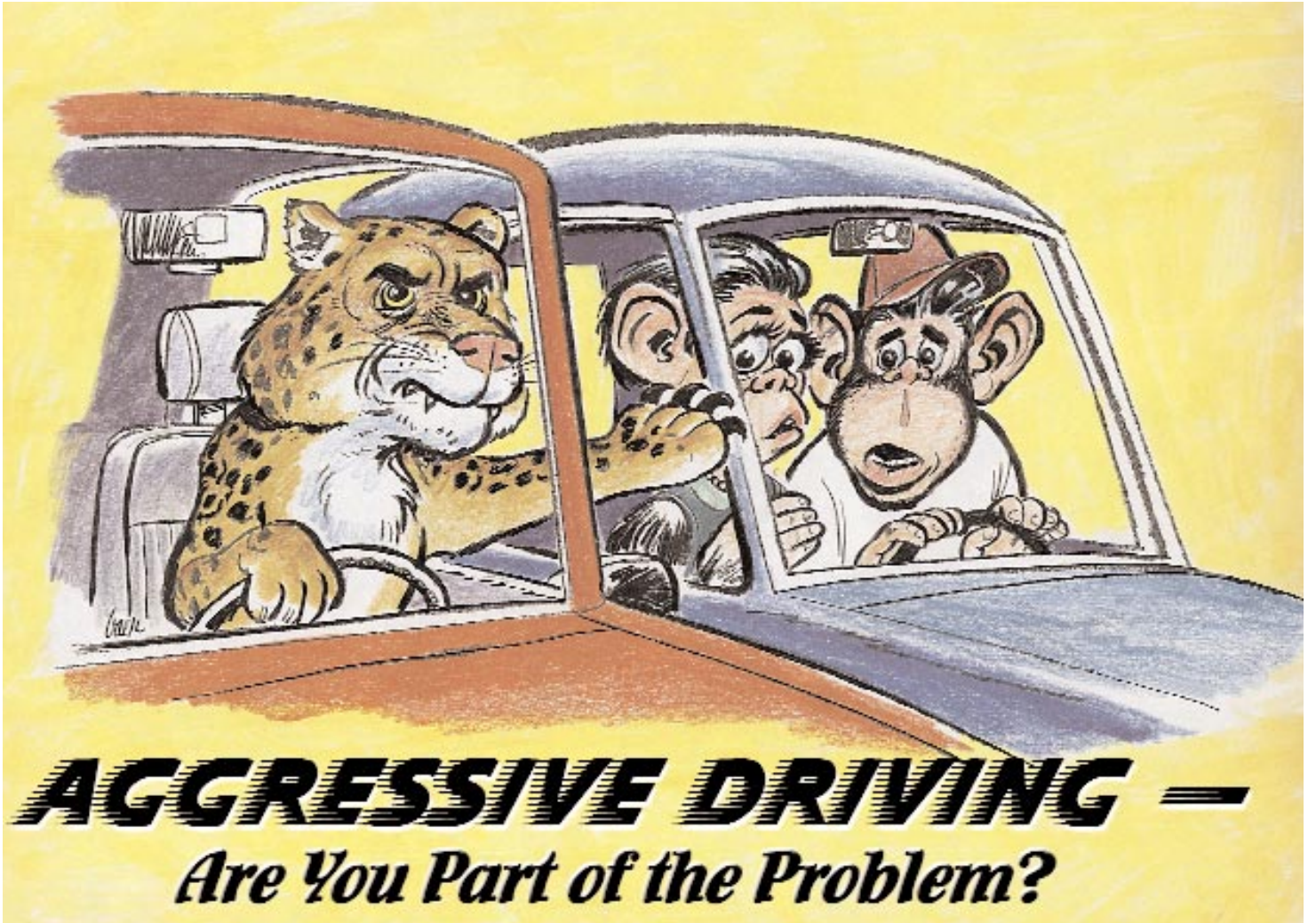
❑ Boosters should be used for children who weigh more than 40 pounds but who are not yet tall enough to use the vehicle's seat belt properly. NEVER put the shoulder belt under a child's arm or behind its neck.

Some Other Safety Tips

❑ If your child's safety seat is in a crash, don't use it again. Most insurance companies will replace them when they are claimed as damaged in a crash. A child safety seat may have hairline fractures that can't be seen, but can affect its ability to protect the child in a second crash.

❑ Set a good example. Recent studies done by the National Highway Traffic Safety Administration (NHTSA) show that parents who don't buckle-up have children who don't buckle-up.

For more information on selecting the proper child safety seat or installing it correctly, check out the NHTSA website at http://www.nhtsa.gov. This website also offers a complete list of child safety seat recalls. ■



AGGRESSIVE DRIVING — Are You Part of the Problem?

CW4 Alfred L. Rice
Third U.S. Army Safety Officer
HQ U.S. Army Forces Central Command
COUNTERMEASURE, July 2000

Illustration by Mr. David Bear

(Editor's Note: Road rage differs from aggressive driving in that road rage involves a violent traffic dispute (physical assault or vehicle contact). Aggressive drivers operate their vehicle in a bold or pushy manner, often violating traffic codes like speeding, following too close, and making improper lane changes.)

You have seen it a thousand times. You're driving the speed limit in the slow lane, when someone comes up right behind you and hugs your rear bumper? What do you do?

A recent American Automobile Association (AAA)/Gallup poll shows we fear aggressive drivers more than drunken drivers. The aggressive driver is typified by behavior such as cutting people off, tailgating, speeding, and careless weaving in and out of lanes. All common descriptions of what we see in our daily commute to work. Unfortunately, these actions put the rest of us at risk.

Driving is a complex activitity and no one is perfect. Law enforcement agencies do their part to control our crowded roads, but there may not be any easy solutions to the cultural driving patterns, which are increasingly leaning towards aggressive driving. Statistics show more and more that aggressive driving causes accidents.

How can we avoid being victims of aggressive drivers? The AAA Foundation provides three guiding principles:

- **Don't offend.** Be courteous to other drivers by using turn signals and by not cutting off other drivers. If you are driving slower than other traffic, use the right lane. Avoid making gestures that may anger other drivers. Avoid the urge to tailgate other vehicles.
- **Don't engage.** Stay clear of angry drivers. Control the urge to retaliate from what may appear to you to be the other driver's lack of courtesy. Avoid eye contact, which may encourage the aggressive driver.
- **Adjust your attitude.** Avoid viewing the driving activity as a contest that requires you to win. Allowing more time can remove the sense of urgency. Listen to soothing music and practice relaxation techniques.

Violent and aggressive driving is increasingly on the rise. You can avoid becoming a victim by using these tips. You can also play a major role in making our roadways safer by reporting aggressive driving incidents to the appropriate law enforcement authorities. ■

A Passenger's Tales of Terror!

Photo courtesy of author

MAJ STEPHANIE JOHNSON
AFIT/CI/CSU
FE Warren AFB, WY

When I tell passengers in my car that I've been in five major vehicle accidents in my lifetime (a mere 35 years!) sometimes they get a look of panic on their face. To keep them from jumping out at the next stop, I calmly explain the many lessons learned. These lessons have made me a more defensive driver and leery of spur-of-the moment actions. Each accident was a result of senseless acts that could have been prevented. Each accident has provided valuable lessons—lessons to pass on to others.

Singing the Same Tune

"Don't drink and drive ... drive responsibly." How often have we heard those words at commanders calls and safety briefings? A civilian driver needed to have heard those words back in 1968. I was four years old and just had finished a day of fishing with my parents in Galveston, Texas. The sun had begun to set over our fishing pier and we loaded our Volkswagen "Bug" with our fishing gear and catch of the day. My father drove while my 7 1/2 month pregnant mother sat beside him. I was stretched out across the back seat, which was just comfortable enough to take a nap. Unfortunately, our vehicle did not have rear seat belts.

My next memory was of being smashed against the backs of my parents' seats and hearing the sound of metal crashing and my parents screaming. A drunk driver had run a red light and hit my mother's door. He'd barely left the bar before crashing into our car.

I can vividly remember people getting us out of the car and bringing us into the bar where the other driver had consumed his last drink. I was frightened for my mother and my soon-to-be-born baby brother. Fortunately, we only had minor injuries. My last memory of the accident was seeing the car the next day. It was a heap of metal. The steering wheel was bent where my father hit it and the car reeked of the smell of our catch.

Like a record that keeps skipping, the message — "don't drink and drive" — is one that needs to be repeated again and again.

Strange Things in the Night

My second accident occurred 12 years later. It was the kind of night most parents dread. I was 16 and my parents had given me permission to go out with some friends that night in their car. I was ecstatic! The four of us went to a popular mountain slide that provided a scary and exhilarating ride. Little did I know, however, that the scariest ride was still ahead of me that night.

After dropping off one of my friends, the three of us headed home. We approached a long curve in a neighborhood that had a lake. A boat owner had only shortly before unloaded his boat into the lake and parked his trailer too far out from the curb. We rounded the curve too fast and hit a corner of the trailer.

From where I sat in the backseat, all I can remember is the car spinning. Later I woke up as paramedics grilled me with questions. The passengers in the front seat thought I was dead — but I had only lost consciousness. I wound up with a concussion and the vehicle was totaled.

There were several lessons here: (1) New drivers often have more enthusiasm than skill, (2) Driving too fast for the road or the conditions can quickly get you into trouble, (3) Parked vehicles can be a real

hazard after dark; and (4) Passengers need to speak up when they think the driver is being unsafe.

The last lesson can be particularly hard to learn. Being an assertive passenger takes courage and the foresight to see potentially dangerous situations. At that time I was a teenager enjoying my first night out with my friends in a car and did not have the courage to speak up. That's not true now — I recently had to tell a friend who was showing off his new sports car on a road in the Napa Valley to "slow it down."

What Did the Weather Report Say?

I was a junior in college when I had my third auto accident. Thanksgiving break was upon us and we were all excited. I was catching a ride with a fellow ROTC cadet to my home, located about three hours south of the campus. The snowflakes began to fall as my friend came by to pick me up. By the time we left town, we were in a decent Colorado blizzard.

To this day I have no recollection of what happened in the accident. I remember that we were driving through a town and then—the next thing I knew—I was regaining consciousness in an emergency room. I couldn't remember the day, my parents' phone number, or what had happened during the previous five hours. I was in a state of panic! I was being wheeled into an X-ray lab when I noticed how swollen, bruised and bloodied my face was. Before I went to sleep in the hospital that night, I found out that I'd broken my nose, sliced an ear, suffered a concussion and shattered a kneecap.

The next morning the police came by and told me that a semi hauling gasoline had driven across the highway in front of us and we had slid and become pinned underneath the trailer. My friend, who had been driving, was in intensive care with internal injuries. The accident cost him his commission in the Air Force and mine was in jeopardy. It took numerous doctor visits along with rehabilitation, and support from my detachment commander to regain my commission status.

"Get home-itis" had gotten the best of us. That, coupled with our loss of respect for the bad weather, had led to the semi's driver not seeing our Volkswagen "Bug" and our being on a slippery road that landed us beneath the semi. Again, I should have spoken up and told the driver that we either needed to leave prior to the storm or wait it out. Passengers should act as co-pilots, advising and being on the lookout for possible hazards. Oftentimes it's the passenger who was along for the ride who got more than they bargained for.

Red Means Stop

Green means "go," yellow means "caution" because a red light is coming, and red means "STOP"! Elementary driver's education stuff, right? Apparently, some drivers need a refresher course.

I was stationed in Alaska and making preparations to close on a house. The day before we moved out of our rental, the bank called and requested some additional paperwork for the closing. In order to keep the closing on schedule, I quickly obliged and loaded my two small children into our "Alaskamobile" — a Chevy Suburban. Normally, I would have taken our smaller Subaru, but I had just packed the Suburban with the first load to take to our new house, along with two car seats.

Driving on Anchorage Boulevard, I soon crossed paths with an inattentive driver. As I entered an intersection, a large pickup ran a red light and broadsided me. I suffered a broken arm but, fortunately, my children escaped uninjured. I credit that to the type of vehicle I was driving, the child seats, and the fact that the impact was on my side.

However, at least there was a happy ending. As I was lying in bed the next morning recovering, my entire office showed up and moved all our belongings into our new home.

Give Them a Brake!

The last accident happened in May of 1996. I was on emergency leave in Seattle, Washington, because my father-in-law was having difficulties recovering from bypass surgery. After a long day at the hospital, my mother-in-law and I headed back to her house to rest.

About 11:30 p.m. that night we got a call telling us that my father-in-law had died. A family friend came over and offered to drive us to the hospital. We were traveling north on Interstate 5 when we came upon a highway construction area. The construction site was well lit and had plenty of warning signs, so our friend slowed down to about 5 mph as we merged into the one available lane. However, an inattentive driver behind us did not slow down and rearended us at 55 mph.

We were all loaded into an ambulance and, as it began to drive away, I asked what hospital we were going to. When the paramedic asked why, I wanted to know, I told him we had been on our way to Providence Hospital where my father-in-law had died. The ambulance quickly diverted there.

We, and more importantly my mother-in-law, never got the opportunity to see and say "goodbye" to my father-in-law in the way we had intended. The night would have been so much different had the other driver heeded the warning signs to give construction workers (and other drivers) a "brake."

In Conclusion

I never imagined I would have this type of accident record — it's still hard for me to believe. Each of these accidents had physical, financial, and mental costs and could have been avoided, had other drivers been more responsible and attentive. Also, as a passenger in four out of the five accidents, I could have been more responsible and not put myself or allow other drivers put me in dangerous situations. Each occupant in a vehicle must be proactive in making sure the trip is safe.

The lessons learned are plentiful — don't speed, always drive defensively and pay attention. Five accidents have shown me that it only takes a few seconds for the sounds of twisting metal combined with images of losing your family to ruin a routine outing or trip. Don't cause a tragedy in someone else's life because of your carelessness. ■

Listen to the Bell

ENSIGN J. F. MONTES
Courtesy ***Ashore*** Fall 1999

My whole life I have been a hands-on type of guy. My father always told me, "The world is an easier place to live in if you understand how things work." He was the kind of guy who had gloves, goggles and jack-stands in his garage. I never thought that one day I would ignore the respect for hand tools he had emphasized so much.

But I did -- on a gloomy Saturday morning in Queens, New York. I was 17 years old and had finally managed to save enough money to buy my dream car. It was a rusty Mustang convertible. I had only driven the car for a couple of weeks, when I realized it needed a brake job. Just as any teenager with his first car, I was pretty much penniless, so I decided to change the brake pads and shoes myself. My father had rented a two-car garage that was about five miles from the house. That was where he kept his tools and the family's 1968 Mustang Coupe.

Eager to get the job started, I grabbed my car keys and left in a hurry without any plans on how to tackle this project. I bought the parts I needed on the way. When I got to the garage, I realized I didn't have the keys to my parent's Mustang and I wouldn't be able to take it out of the garage. I didn't feel like driving back home to get the keys, so I squeezed my car between the garage wall and the car already inside. Not only was it a tight fit, but because of an air compressor and a tool chest, half the car was sticking into a narrow road that led to the main street.

I jacked up the car and placed the jack-stands underneath it (probably the only right thing I did that day). Then I removed all four tires, completely forgetting that my dad had always told me to do one spindle at a time.

Blinded by my false sense of security and haste, I kept thinking, "I know what I'm doing." Then I did something that took me out of action.

I couldn't find the tool my dad and I had designed to remove the rear springs that held the brake shoes in place, so I opted for the "universal pry bar/chisel/punch

tool" also known as a screwdriver. At the time, a little bell should have gone off in my head, but it didn't. Or, if it did, I didn't hear it. I should have remembered all those times I heard my dad tell me to use the proper tool for the job. I guess I was determined to learn the hard way.

Five minutes into the job, I had trouble with the screwdriver getting jammed between the spring end and the stud that held it in place. As I knelt down to take a closer look -- of course without goggles -- the spring released and the screwdriver flew into my face.

I jumped up and felt the blood running down my face. My right eye was so full of tears that I couldn't see. I was disoriented, and the right side of my face was going numb. I fought to stay calm as I looked for a mirror so I could see my face, but couldn't find one. The right side of my face started to swell and ache and I knew I should probably head for the nearest hospital. Since there was nobody around and my car had no wheels or brakes, I had to get help.

I knocked on the door of the lady who rented the garage to my father. The shocked expression on her face when she saw me was enough to send anyone into a panic. She gave me a mirror, and I saw a one-inch gash between the bridge of my nose and my right eye. I saw that only with my left eye; I couldn't see out of my right one. The injury was so deep that my tear duct was exposed and hanging down like a piece of thread. I couldn't drive my car, and I couldn't close the garage door because half my car was sticking into the street. All I needed now was for a piano to fall on my head.

It took me about two hours to get to a hospital. As I waited in the emergency room for hours, I remember my pride hurting more than my injury. The doctor told me that if the screwdriver had hit me just a bit higher, I would probably have lost my right eye.

In the year that followed, I joined the Navy and became a jet engine mechanic. I got to know people who had interesting stories about how they had gotten injured at some time in their life. I have seen everything from broken hands and fingers, to black eyes on innocent bystanders. The story was the same 99 percent of the time -- the injury was caused because someone was using the wrong tool for the job or wasn't following the rules.

Twelve years have passed and every time I see that sporty one-inch scar under my right eye, it reminds me of my mistake. After that experience, I have always listened for that little bell in the back of my head. It's kept me from injury more than once, and I hope it continues to do so for the rest of my life. ■

Editor's Note: In the spring issue we ran an article titled, ***"Hammering Away At Safety"*** that warned of the dangers of using hand tools improperly. Ens. Montes' story is a classic example of what can happen when you don't use the right tool for the right job.

We know there are some great experiences out there just waiting to be told, so how about jotting them down. We'd like to hear from you – how your use of a seatbelt or helmet saved your life or protected you from serious injury, or some lessons you've learned concerning driving or recreational safety. Sharing your experiences with other Road & Rec readers can be an excellent and entertaining way of helping us get the safety message out to your fellow airmen.

We accept articles of any length. Double-spaced draft hard copy is best. Any supporting color slides, color photos, or graphics you can contribute will be greatly appreciated. You can be sure your byline will accompany the story so that you will receive full credit for your contribution.

You can reach us by mail at HQ AFSC/SEMM, 9700 "G" Avenue S.E., Kirtland AFB, New Mexico 87117-5670, or call commercial at (505) 846-0983 or DSN 246-0983. You can also fax to DSN 246-0931 or E-mail to vanelsbr@kafb.saia.af.mil.

We look forward to hearing from you and sharing your story!!!

Taking A Fall

BOB VAN ELSBERG
Managing Editor

I was so proud. I had my new Superman towel and it fit around my shoulders just like the "man of steel's" cape. Being filled with an enthusiasm unencumbered by reality, I eyed the dirt driveway beyond my grandmother's porch. Since the porch had already put me a good five feet above ground level, I figured it would make a good launching platform for my first "Superboy" flight. Running as fast as I could and firmly grasping my "cape," I leapt into the air for all I was worth.

It was a very brief flight. To my credit, I cleared the stairs before my flight path coincided with the ground. Being young, the damage amounted to a couple of skinned knees, a pair of sore palms, and a rude introduction to two facts: (1) I wasn't ***Superboy,*** and (2) gravity always works.

Still, I was lucky. At least I'd survived trespassing the law of gravity and had learned some valuable lessons in the process. Others, however, haven't been as lucky. Falls are the second most common cause of accidental death after motor vehicle accidents. Indeed, falls are the LEADING cause of death in the home.

Every year scores of Air Force people are injured in falls because of tripping, slipping, climbing, goofing-off or just plain losing their balance. However these accidents happen, the injuries result in a lot of pain for the victims and cost the Air Force hundreds of thousands of dollars of lost productivity annually. The following are some examples of what can happen when the law of gravity gets enforced.

The Accidental Tourist

You never know what to expect when you're "south of the border" and, what you don't know, CAN hurt you. During a sightseeing tour to Nogales, one airman had been sipping some brews when he decided to take a stroll down a sidewalk. The trip was going nicely until he stepped on a piece of cardboard covering a hole more than three feet deep and one foot wide.

"Ay caramba" -- or words to that effect -- no doubt escaped the lips of our shoeleather tourist as he landed on his left knee and tailbone. A later FDA (Fall Damage Assessment) found our tourist had contusions to his right thigh and left knee, AND a possible fractured tailbone. No doubt he sat rather "gingerly" during the drive home. And while the brews may have made our tourist feel "better" before the fall, they didn't do much to eliminate the pain afterwards.

It Weren't No Ladder

An intrepid fireman decided to turn up the volume on the PA system in the fire department break room. Despite being 'vertically challenged,' thanks to the placement of the speaker high up on the wall, our fireman was not to be daunted. Climbing onto the arm of a recliner, he was reaching for the volume knob when the laws of physics and gravity took over.

Standing on the arm -- therefore, nowhere near the chair's center of gravity -- caused his weight to overcome the chair's balance. Could it speak, the recliner might have yelled "uncle" just before it flipped.

The fireman was now thoroughly in the clutches of gravity. Falling backwards, he hit his head, back and shoulders on the concrete floor. The resulting back strain earned him five days of quarters -- during which anything beyond breathing likely resulted in an "ouch." And you'd think a fireman would use a ladder!

Just Call Him 'Pug'

Two buddies -- we'll call 'em "Frick" and "Frack" -- were sipping the suds one evening at Frack's house when they decided to hoof it over to Frick's dorm. Feeling a bit froggy, Frick grabbed Frack and proceeded to engage in a bit of horseplay as the pair walked down the sidewalk.

Ah -- but wouldn't you know it -- Frick's right foot got in the way of his left and the law of gravity took over. Frick's rapid transition from the vertical to the horizontal ended with him cushioning his landing with his face. His abrupt meeting with the concrete left Frick with a fractured nose and five days on quarters to admire his new profile.

Timber!!!

Paul Bunyan didn't need a ladder when he chopped timber -- but then he was a fictional character. Our real-life lumberjack, however, needed a ladder to get his chain saw within striking range of a limb 15 feet above the ground. And it was a 'big-un' -- an 8-footer measuring 14 inches in diameter.

Leaning his ladder against the tree, our woodcutter made short work of the piney-protuberance. Unfortunately, in his eagerness, he neglected to consider the limb's trajectory en route to the ground. As it turned out, something important ***was*** in the way -- specifically, the ladder upon which he was perched!

The limb -- now completely under the influence of gravity -- scored a direct hit on the ladder, causing it to tip. Gravity, being no respecter of persons, then acted to reunite the luckless lumberjack with good old terra firma, just as it had the limb moments before. However, while the tree limb could suffer no more injuries, our woodcutter could -- and did. His fall left him with a broken wrist -- an injury that temporarily deprived him of the use of one of ***his*** limbs.

They 'Fell' for Each Other

It was a romantic moment. The breeze gently whispered through the tall pines as "Juliet" sat on the top railing of a house deck. "Romeo," her sweetheart, just couldn't resist giving her a big squeeze. Strolling across the deck, he wrapped his arms around her to hold her close.

Unfortunately, his amorous approach upset her balance on the rail. Locked in each other's arms, Romeo took Juliet over the "balcony" with him to the ground five feet below. When Juliet landed on her back in same sandy soil and shrubbery, at least she didn't have to utter those famous words, "Romeo, Romeo, wherefore art thou, Romeo?" That's because she knew where he ***was*** -- she'd cushioned his landing! In the end, his romantic squeeze couldn't match the "squeezes" she got as her back and neck muscles spasmed while she spent a day on quarters.

He's 'Cuckoo' for Coconuts

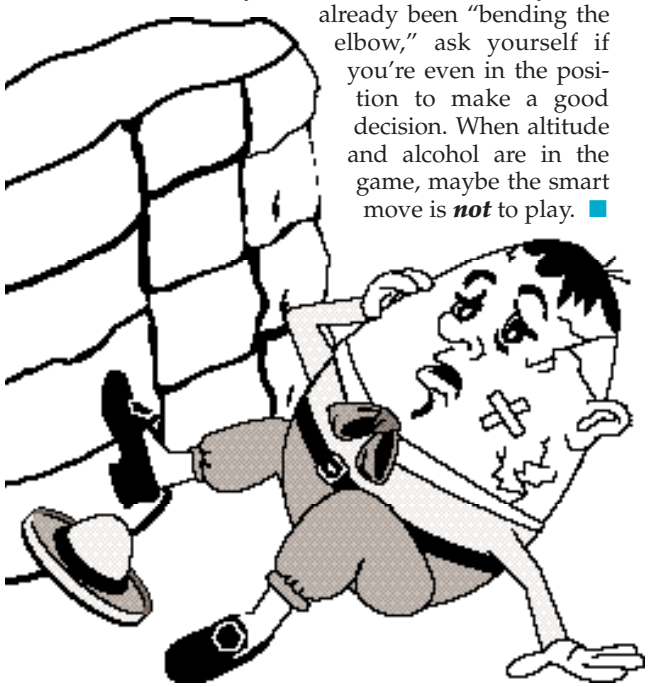
A "well-lubricated" partyer was enjoying a barbecue with fellow aircrew members during a TDY layover on a pacific island. "Well-lubricated" was an apt description as our partyer had quaffed six brews much faster than his body could metabolize them.

Night settled over the island and, as midnight neared, most of the island's residents were asleep. Not so our lubricated partyer. Taking a bet that he could scale a palm tree and retrieve a coconut from its lofty perch 15 feet above the ground, he began his journey with gusto. However, he'd barely passed the half-way mark when his grip slipped and gravity snatched him from the tree, rudely dumping him on his back in the sand.

Lying there for five minutes to catch his breath and to perhaps contemplate the value of coconuts, our airman finally rose to his feet. Deciding he was only a ***little*** worse for wear, he sauntered off to the sack, only to wake up three hours later in pain. A visit to the base clinic produced some pain killers -- good enough to get him to the next TDY stop. By the time he arrived there, however, he was feeling worse and visited the military sawbones. X-rays and a cat scan quickly identified the culprits -- three cracked ribs and four cracked vertebrae. All that and NO cracked coconut to show for it. However, he ***did*** crack enough bones to spend 11 days on quarters.

The Bottom Line to Our Story

As was said at this story's beginning, gravity **ALWAYS** works. If you're a slow learner, alcohol and/or inattention will help remind you. Since you can't do anything about gravity, you might want to use a little ORM as you consider your options. Before using a chair for a ladder, think about what might happen. Think about the potential consequences -- especially if you fall into gravity's not-so-gentle grasp. Ask yourself if there isn't a better way to do what you need to do, then come up with a plan that's safe and follow it. When you're done, take a moment to reconsider what you've done and how good it feels to have all of your bones intact. And, if you've already been "bending the elbow," ask yourself if you're even in the position to make a good decision. When altitude and alcohol are in the game, maybe the smart move is ***not*** to play. ■



BOB VAN ELSBERG
Managing Editor

I saw a grey clump moving along the tree limb. It was a squirrel -- the first I'd seen that was within the range I could shoot accurately as a young hunter. I estimated the distance at about 35 yards, well within the range my .22 single shot rifle if I held steady. But I couldn't hold steady. In the excitement of the moment my heart began to pound and my vision narrowed to a tunnel. Before I could control my trembling enough to steady the rifle, the squirrel leapt from the limb and scampered away in the tall grass. I was momentarily tempted to take a shot, thinking I might get lucky. However, I decided against wasting the bullet -- my minimal allowance didn't allow for wasting bullets.

As it turned out, it was a good thing I'd held my fire. I'd barely reset the safety on my rifle when two girls came walking around the tree where I'd seen the squirrel. In my excitement I'd failed to see them in the background. Now my heart beat even harder, driven by the fear of what I had almost done.

I knew all too well what I'd almost done. On my first hunting trip another hunter had fired hastily, mistaking me for a deer and sending two rifle rounds near enough to my head that I felt the breeze. As a young hunter I had now twice seen how easy it was for a mistake to nearly lead to a tragedy.

Since then I have talked to several hunters who have had close calls. In heavily hunted areas it's all too easy to be a victim of "mistaken identity" or a shot taken hastily at a sound or a movement. Also, a poorly aimed shot may carry for hundreds of yards, potentially threatening other hunters on the ground or in treestands. Being **SEEN** by other hunters and **NOT** being mistaken

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for game are two important ways hunters can control the risks to themselves when they're in the woods. Here are some tips to help hunters do that:

- **NEVER** wear blue or red during turkey season. Because of the environment in which turkeys are hunted, it is more likely that a shot may be taken when only part of the animal is seen. Wearing any color that would be naturally found on a turkey greatly increases your chances of being shot.
- **NEVER** wear brown or white during deer season. These are a deer's primary colors and, as the author found out firsthand, wearing these colors can make you a target.
- **NEVER** carry a deer or a turkey on your shoulders through the woods. Instead, carry it as low or near to the ground as possible. Carry smaller game in a game bag and mark larger animals with blaze orange to prevent someone else from shooting at it.
- **NEVER** shoot at sound or movement. Make sure you identify your target **BEFORE** shooting, and also check out the background (remember the two girls mentioned at the beginning of the story?) Don't shoot if there is any danger your bullet might carry beyond the target and injure someone.
- **NEVER** assume you are the only hunter in the area. It's better to assume every sound or movement is another hunter until you can safely identify it as otherwise.
- **NEVER** wave, whistle, or make animal calls to alert an approaching hunter to your presence. Always shout to identify your location to the other hunter.
- **NEVER** use your rifle or pistol scope for binoculars.
- **NEVER** place your finger inside the trigger guard or release the safety until you are ready to fire.
- **NEVER** assume another hunter is handing you an empty weapon. Always open the action and check the chamber.
- **ALWAYS** wear fluorescent or "blaze orange" colored-clothing when you are moving through heavy timber.
- **ALWAYS** know the location of other hunters if you are hunting in a group. Pass up any shot where the game is between you and another hunter.
- **ALWAYS** unload your weapon before coming into camp or getting into a vehicle.
- **PROTECT YOURSELF** against the chances of being shot by another hunter by sitting at the base of a tree trunk that is wider than your body. You'll be able to see approaching hunters and you'll be protected from shots fired behind you.
- **MAKE SURE** your treestand is in good condition and properly secured to the tree. Also, wear a shoulder harness with a safety belt attached to the tree to prevent you from falling. Every year several hunters are injured or killed as a result of falling from treestands.
- **MAKE SURE** someone knows where you are going and when you plan to return. ■

Reprinted courtesy ***Safetyline***

Each year, more hunters die from drowning and hypothermia than from gunshot wounds.

Most of the mishap reports about hunters in boats are not dramatic stories. These hunters typically didn't succumb to a struggle with a 20-foot python or an enraged hippopotamus that attacked their boat. Rather, the reports usually read: "fell out of boat reaching for a decoy and never resurfaced," or, "capsized boat while standing to take a look at passing ducks ... struggled briefly in cold water, then became paralyzed before help could arrive."

Keep in mind that many hunters don't consider themselves as "boaters," and, therefore, aren't aware of the special conditions and challenges of the marine environment. To survive a hunting trip by boat, you need to know about your boat, its equipment, the weather and yourself.

Know Your Boat

Most hunters use smaller, more easily transportable craft like johnboats or canoes. These boats, because of their low freeboard or narrow beams, are prone to swamping or capsizing. Here are some ways you can avoid an unplanned fall into the water:

- Never cross large bodies of water during rough weather.
- Don't overload your boat with passengers or equipment. Know the carrying capacity of your boat, which should be listed on the capacity plate attached to the inside of the hull.
- Stay with your boat if you capsize and can't get to shore.
- Avoid standing up or moving around in the boat and keep your dog on a leash. Remain seated and be careful to store your equipment properly. Never move about in your boat with a loaded firearm.

Equip Yourself for Survival

Personal flotation devices (PFDs) are essential to safe hunting from a boat. Statistics show that boats less than 20 feet long are the most likely to capsize, and most

people who fall overboard do so from (these) smaller boats. Have a PFD for each person onboard the boat when hunting. Special vests designed for hunters or fishermen are available.

Keep This Equipment Onboard

1. Day and night distress signalling devices, such as horns or flares.

2. An anchor with enough line to keep your boat from drifting.

3. Oars or paddles.

4. A water bailer (a coffee can or a scoop made from a bleach bottle will do).

5. A first aid kit.

6. Extra foul weather clothing.

7. A compass and charts of the area.

8. Emergency tools and spare parts, such as spark-plugs for your boat motor.

The Weather Isn't Your Friend

Most hunters who die in boating mishaps do so on smaller bodies of water late in the year, when water and air temperatures are colder and storms are more frequent. Therefore, don't risk going out if the weather looks threatening or if storms are forecast for your area. If you do get caught in a squall, head for the shore by cutting diagonally across the waves. Also, improve your boat's stability by moving your passengers and equipment to the boat's center.

Hunters deliberately seek out remote areas. Unfortunately, these are areas where there is less chance of getting help in an emergency. So that you can be located if you have a problem, let someone know the general area you will be in and leave them a float plan.

Know Yourself, Too

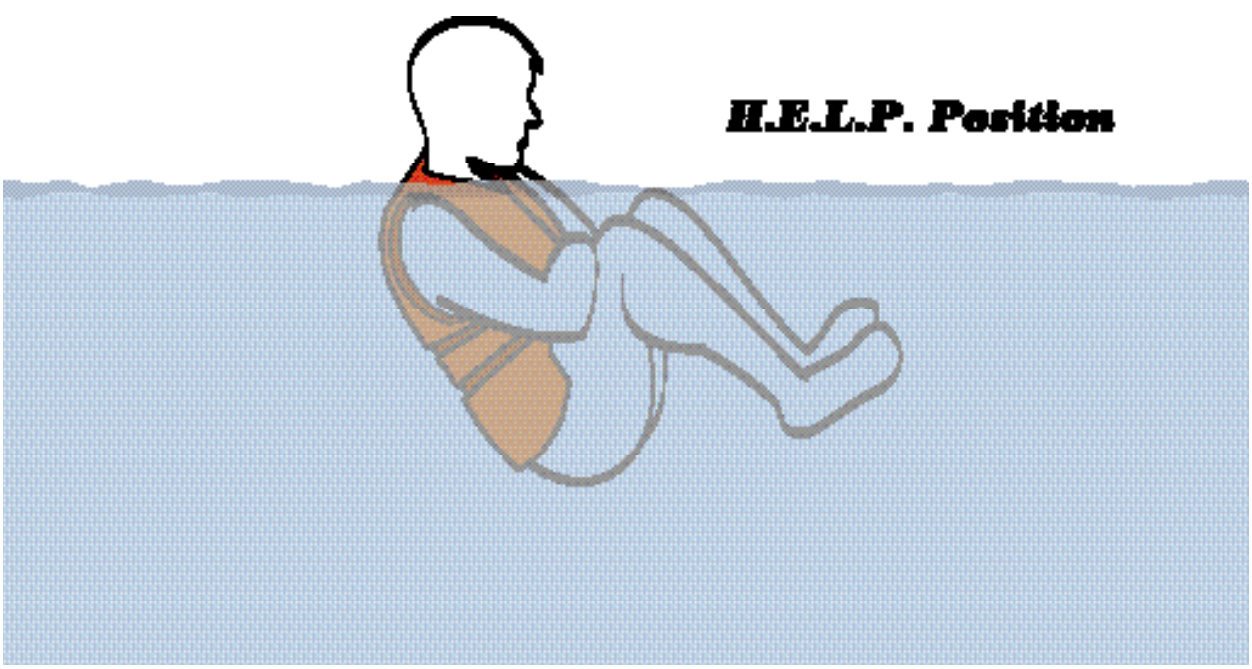
As a boat operator, you must be alert and physically able to take care of any emergencies that may arise because the lives of others may hinge on your actions. Hunting from a boat can be very physically demanding. Hours of sitting and being exposed to the wind, sun and glare can slow your reaction times. Don't over-extend your endurance by staying out on the water after you've become fatigued.

Hypothermia is a dangerous threat which is caused by the body being subjected to prolonged cold. The most common reason is exposure to cold water, although long-term exposure to cold air can also cause hypothermia. A person who is immersed in cold water can lose body heat 25 times faster than he or she would in air at the same temperature.

If you do fall into the water, treading water only hastens heat loss. While waiting to be rescued, the best thing to do is to assume the H.E.L.P. position (heat-escape-lessening-position). This cuts your body's heat loss by half by reducing direct exposure to the water of those body parts where heat is lost most quickly, such as the armpits, ribs, groin, and head.

Every sensible hunter knows that alcohol and drugs shouldn't be mixed with guns and boating because alcohol seriously impairs judgment and coordination. You know alcohol affects your aim. Did you also know that half of the people who die in boating accidents had been drinking?

So this fall, why not take the time to be careful while you're out there hunting on the water? After all, the goal is to splash the duck, NOT the hunter! ■



If You Wait... It May Be Too Late!

Buckle up BEFORE you pull out.