



Wants You
To Be Safe.



The Safety Corner

From the Marine Corps Center for Lessons Learned

October 2009



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Iraq Site Wiring Deemed Risky (condensed)

[MarineTimes](#)

At least three U.S. service members have been electrocuted in Iraq while taking showers in the eight years since the beginning of GWOT. The highest-profile death was that of a Staff Sergeant (Green Beret) who was electrocuted while showering in his barracks early last year. Other troops and contractors have died or have been seriously injured in other electrical incidents.

This confirms a pattern of shoddy application of relevant electrical codes, the absence of critical safeguards, and the lack of adequate oversight. Task Force SAFE in Iraq, which was created to deal with the electrical problems, began extensive inspections and repairs of wiring in about 90,000 U.S.-maintained facilities in Iraq. Half of those problems have since been fixed, but about 65,000 facilities still must be inspected.

Even in austere, combat environments, the Army must focus on promoting a 'culture of safety' for all soldiers, civilians and contractors. A safety team, based at the Army's Combat Readiness/Safety Center at Fort Rucker, Ala., was sent to Iraq late last summer. In addition to the use of uncertified electrical parts, the team cited "inconsistent enforcement of any standard, inconsistent and inadequate standards for using electrical devices, incomplete application of electrical codes and lack of thorough contractor oversight."

The result, the team concluded, was unmitigated electrical-related hazards throughout Iraq, with improper bonding a "most pervasive" problem and with ground fault circuit interrupters, commonly used in American homes, not found in a large number of the facilities the team inspected (required in places where electrical circuits are in proximity to water sources). They are designed to measure electrical currents and shut off power to the circuit if necessary. The team said "ammunition, dirty laundry and other combustibles touching or in close proximity to potential electrical fire sources" also created a high risk for troops in their living quarters.

[Read the complete report in the Marine Times.](#)



Did You Know?

Last year, 94 troops stationed in Iraq, Afghanistan or other Central Command countries sought medical treatment for electric shock, and 231 electric shock incidents occurred in more than 89,000 facilities.

Next Issue: OPSEC

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[Do you think hands-free phones are safer than handheld phones?](#)

**Mishap Data**

- ◆ An estimated 600 people die every year of electrical causes. Most of these accidents involve low voltage (600 volts or less).
- ◆ An estimated 3,600 people suffer disabling injuries from contact with electricity each year in the U.S.
- ◆ Electrical fires in homes kill an average of 485 Americans each year and injure more than 2,300.
- ◆ Most electrical accidents are caused by misuse and poor maintenance of electrical appliances, incorrectly installed wiring, and overloaded circuits and extension cords.
- ◆ During a typical year, home electrical problems account for 67,800 fires.

Do's And Don'ts

1. Insulation is a primary protection against electric shock, but it can get worn or cracked. Inspect it regularly. Look for frayed cords on power tools.
2. Replace damaged electrical equipment or have it repaired at an authorized repair center. Replace frayed cords, broken plugs or cracks that could cause hazards; cut and throw out damaged cords.
3. Plug grounded (3-wire) tools only into grounded outlets.
4. Don't pick up power tools by their power cords.
5. Read and obey all signs and posted warnings. Don't let these important sources of information become an unnoticed part of the landscape.
6. Don't work with electricity in the rain, and don't work with it while you're standing in water. Use ground fault circuit interrupter (GFCI) protection when working where water is near electricity (in areas as such your kitchen, laundry room, bathroom or outdoors) to protect against electric shock.
7. Leave technical, complicated or confusing tasks involving electricity to electricians and other specialists. A little knowledge can definitely be a dangerous thing when it comes to wiring, troubleshooting and repairing electrical devices and circuits.
8. If you are working with someone who gets shocked, first make sure you shut down the source of the current. If the victim appears to still be touching the source of the shock, move him or her away using something made of wood or plastic.
9. Make sure that all appliances and equipment are approved by an independent testing laboratory, such as Underwriters Laboratories (UL).
10. For appliances and equipment, follow the manufacturer's instructions.
11. When using a generator, plug appliances directly into the generator or use a heavy duty outdoor-rated extension cord that is free of cuts and tears and has a 3-prong plug.
12. Make sure power strips and surge suppressors are designed to handle the loads for their intended use. Don't overload circuits by plugging too many items into the same outlet.
13. Assume that all overhead wires are energized at lethal voltages. Never assume that a wire is safe to touch even if it is down or appears to be insulated.
14. Don't run electric cords under rugs or in high traffic areas.
15. Immediately shut off, then professionally replace, light switches that are hot to the touch and lights that flicker.

Source: Navy Safety Center

**Did You Know?**

From August 2006 to January 2007 at least 283 electrical fires destroyed or damaged American military facilities.

Signs That You Might Need An Electrical Inspection

[SafeElectricity](#)

Signs include:

- ◆ Major renovation or major new appliances have been added in the last 10 years
- ◆ Lights often flicker, blink or dim momentarily
- ◆ Circuit breakers trip or fuses blow often
- ◆ Cords or wall plates are warm to the touch or discolored
- ◆ Crackling, sizzling or buzzing is heard from outlets
- ◆ Extension cords or multiple power strips are permanently in use.

Avoid using extension cords on a continual basis. Use them only temporarily and make sure the cords are in good condition, not frayed, stretched or worn, and out of the path of foot traffic. Never use an extension cord for air conditioners, electric heaters or even fans.

(continued)

Signs That You Might Need An Electrical Inspection (continued)

Remove and keep all electrical cords from behind baseboards, beneath carpets and furniture. This is a major fire hazard.

If electrical items to be plugged in are close together, use a plug bar or surge protector. Make sure not to overload the electrical circuit, which can create a fire hazard.

Most electrical wiring fires start in the bedroom. For this reason, have a professional install arc fault circuit interrupter (AFCI) on bedroom circuits.

Regardless the season, or age of homes, be vigilant and continually check for electrical hazards such as cracked or fraying electrical cords; overloaded outlets and circuits; and improper wattage light bulbs in lamps and light fixtures. Also, make sure smoke alarms are in place and functioning properly.

[Read the complete article at SafeElectricity.org](http://SafeElectricity.org)

Four Very Common Electrical Problems

Wisegeek

1. Intermittent power
2. Power surges
3. Redundant wiring
4. Overloaded circuits

All these issues can cause electrical fires and need to be addressed and corrected as soon as possible.

Intermittent power is a symptom of a wiring problem. The cause of this common electrical problem is loose wiring. To check for this type of problem, trace the electrical cable from the unit to the plug. Look for any sign of wear, fray, or exposed wiring.

Power surges are caused by sudden increases in the power provided by the electricity company. This increase can overload the circuit and cause the electrical item to turn off. There is no way to correct this at the consumer level. The best way to manage these types of common electrical problems is to purchase electrical power bars with surge protection. Plug your electronic equipment into the power bar. This unit has a built in circuit to ensure that any surges that go to the power outlet are run through another circuit.

Redundant wiring is a very common electrical problem that occurs in homes where the previous owner was creating their own electrical wiring. Not all the wiring is used, and in many cases, live wires are left without being properly capped or terminated. Take the time to trace all the electrical wiring to ensure there are no hidden surprises or weak connections.

Overloaded circuits can occur when additional power outlets are created to use existing wiring as their source. This shortcut method creates problems where multiple appliances are plugged in and drawing power at the same time. The demand exceeds the capacity and causes short fuses. Have an electrician determine the power drain on each circuit and arrange to correct the wiring to ensure that each circuit load is balanced. The signs of electrical problems include a recurring need to reset the fuse for a particular circuit or flickering lights.

Electrical Hazards Checklist

USA



The following electrical hazard checklist will help you prevent an electrical shock or fire.

- ◆ Do not overload electrical power strips. Only use electrical power strips certified by UL or CE.
- ◆ Ensure that power strips are visible, are not placed under beds or behind furniture, do not show signs of warping or discoloration and are not daisy-chained.
- ◆ Ensure refrigerators, microwaves, and coffee pots are plugged directly into the wall receptacle, not a power strip or splitter, and are unplugged when not in use (especially microwaves and coffee pots).
- ◆ Inspect appliance plugs and ensure grounding terminals have not been removed; use quality adapters (grounded) in conjunction with appliance plugs.
- ◆ General housekeeping prevents fire conditions; clothing, sheets, dust and other combustible materials must be clear of electrical devices.
- ◆ Inspect electrical switches and receptacles to ensure that they are not blocked, cracked, or show signs of excessive heat (discoloration and deformity). Furniture should be arranged in such a fashion as to provide ready access to all switches and receptacles. Never push anything heavy, like a bed, up against an electrical outlet.
- ◆ Examine light fixtures for signs of excessive heat, such as blackened areas around the light or warping of the ceiling tiles.
- ◆ Ensure proper operation of smoke detectors and availability of functional fire extinguishers.
- ◆ Ensure evacuation plans are posted in rooms, common use areas, and work sites.
- ◆ Ensure emergency exits are not blocked or locked.
- ◆ Ensure emergency contact numbers are posted in living quarters, common areas, and work sites.

Source: Safety.Army.mil

Safety Bulletin

R 121909Z AUG 09

FM COMNAVSAFECEN NORFOLK VA

UNCLAS

QQQQ

SUBJ: SAFETY BULLETIN - RECALL OF FLUKE DIGITAL CLAMP VOLTAGE METERS DUE TO POTENTIAL SHOCK HAZARD UNCLASSIFIED//

ALSAFE 045/09

SECINFO/U/-//

MSGID/GENADMIN/COMNAVS SAFE

CEN/40/AUG//

SUBJ/SAFETY BULLETIN-RECALL OF FLUKE DIGITAL CLAMP/VOLTAGE METERS DUE TO POTENTIAL SHOCK HAZARD//

REF/A/DESC:DOC/CPSC PRESS RELEASE 09-222/-//

AMPN/REF A IS CONSUMER PRODUCTS SAFETY COMMISSION (CPSC)PRESS RELEASE DTD 15MAY09 ANNOUNCING THE RECALL.//

POC/UNIT:COMNAVSAFECEN/NAME:NORFOLK/TEL:DSN 564-3520 X7157/TEL:757-444-3520 X7157

GENTEXT/REMARKS/1. SEVERAL MODELS OF FLUKE DIGITAL CLAMP METERS HAVE BEEN RECALLED BECAUSE OF A POTENTIAL SHOCK HAZARD. AS INDICATED IN REF A, IN COOPERATION WITH THE U.S. CONSUMER PRODUCT SAFETY COMMISSION (CPSC), FLUKE CORP IS RECALLING APPROXIMATELY 52,000 MODEL 333, 334, 335, 336 AND 337 DIGITAL CLAMP METERS MANUFACTURED BETWEEN 29JAN08 AND 27FEB09. FLUKE METERS BEARING THESE MODEL NUMBERS ARE KNOWN TO BE AVAILABLE THROUGH GSA OR OPEN PURCHASE SOURCES. THE EXTENT OF AVAILABILITY IN NAVY WORK PLACES IS UNKNOWN.

2. HAZARD: THE METERS CAN FAIL TO GIVE AN ACCURATE VOLTAGE READING, INCLUDING A LOW OR NO VOLTAGE READING, ON A CIRCUIT ENERGIZED WITH A HAZARDOUS VOLTAGE. THE OPERATOR COULD FALSELY BELIEVE THAT ELECTRICAL POWER IS OFF, THEREBY BEING EXPOSED TO A SHOCK, ELECTROCUTION OR THERMAL BURN HAZARD.

3. MANUFACTURER: FLUKE CORP OF EVERETT, WA.

4. AFFECTED PRODUCTS: FLUKE DIGITAL CLAMP METERS,MANUFACTURED IN CHINA, WITH THE MODEL AND SERIAL NUMBERS SHOWN BELOW [READ IN 3 COLUMNS]. THE MODEL NUMBER MAY FOLLOWED BY AN "A":

SERIAL NUMBER SERIAL NUMBER

MODEL FAMILY STARTING WITH: ENDING WITH:

FLUKE-337 AND 337A 96070000 98890607

FLUKE-336 AND 336A 96220000 98900400

FLUKE-335 AND 335A 97010000 98860104

FLUKE-334 AND 334A 97010000 98870101

FLUKE-333 AND 333A 97010000 98880240

SERIAL NUMBERS THAT BEGIN WITH "S" OR ARE FOLLOWED BY "R" ARE NOT INCLUDED IN THE RECALL. "FLUKE" AND THE MODEL NUMBER ARE PRINTED ON THE FRONT OF THE UNIT AND THE SERIAL NUMBER ON THE BACK. THE INSTRUMENT BODY IS YELLOW, RED, AND BLACK. THESE CLAMP METERS MEASURE 0 TO 600 VOLTS ALTERNATING CURRENT (VAC), 0 TO 600 VOLTS DIRECT CURRENT (VDC) AND 0 TO 400, 600 OR 1000 AMPS ALTERNATING CURRENT.

5. INCIDENTS/INJURIES: FLUKE HAS RECEIVED AT LEAST THREE REPORTS OF CLAMP METERS DISPLAYING AN INCORRECT VOLTAGE READING. TO DATE, NO INJURIES HAVE BEEN REPORTED.

6. ACTIONS: PERSONNEL USING THESE FLUKE MODEL 33X DIGITAL PAGE 04 RUCOWCA1311 UNCLAS CLAMP METERS SHOULD VERIFY THE MODEL/SERIAL NUMBERS TO IDENTIFY UNITS COVERED BY THE RECALL. ACTIVITIES SHOULD TAKE ANY AFFECTED UNITS OUT OF SERVICE IMMEDIATELY AND TAKE APPROPRIATE ACTION TO OBTAIN A FREE REPLACEMENT CLAMP METER.

7. ADDITIONAL INFORMATION IS AVAILABLE FROM THE CPSC WEBSITE:

WWW.CPSC.GOV/CPSCPUB/PREREL/PRHTML09/09222.HTML. THE MANUFACTURER'S WEBSITE PROVIDES DETAILS AND PROCEDURES TO OBTAIN REPLACEMENT UNITS:US.FLUKE.COM/USEN/SUPPORT/SAFETY/33X-RECALL.HTM OR CALL 1-(888)98-FLUKE (983-5853); 7 A.M. TO 4 P.M. PACIFIC TIME, MONDAY-FRIDAY.//

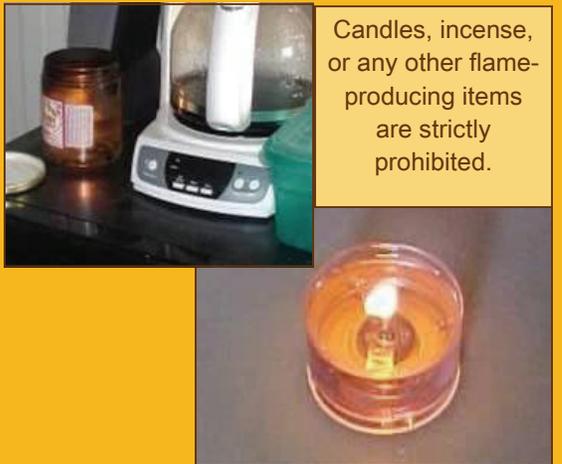
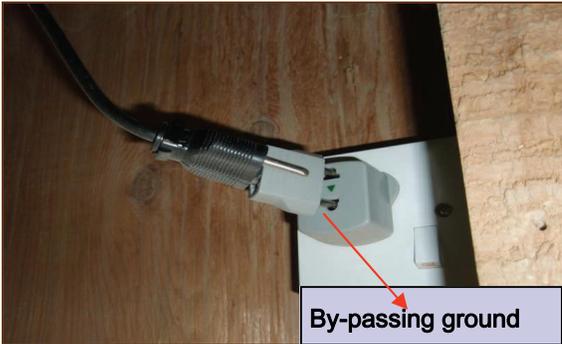
BT



The ground prong provides a safe path for electricity if there is a short circuit. Any appliance with a ground removed must be confiscated. Snipping the ground prong off with pliers is common and extremely unsafe.



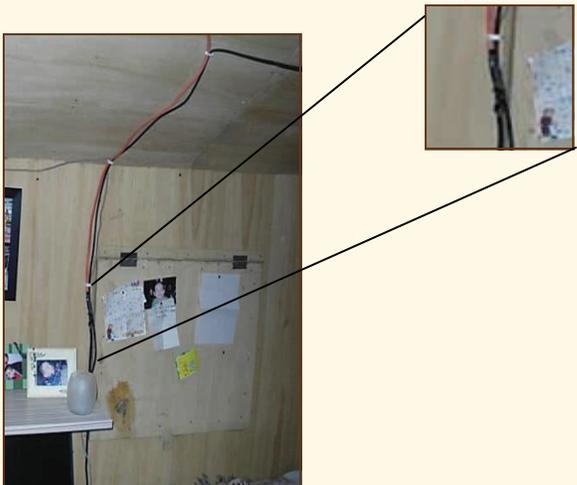
Submit work orders. Writing **"Be Careful"** on the outlet box is insufficient.



Candles, incense, or any other flame-producing items are strictly prohibited.



Scorch mark indicates damage; load meter shows 220 volts, but strip is not plugged in. Poor construction causes these items to fall apart.



Splicing electrical wires is a prime cause of electrical fires. Remove the cords. Remove any devices which were not installed by qualified contractor or military electricians. A "leatherman" tool does not make you an electrician.



(continued)

Common OIF Electrical Hazards (continued)



Loose, damaged, or poorly connected wiring causes fires. All of these items must be properly fixed by a contractor or Base electrician.



Hot plates or other cooking items are prohibited. Remove these items.



Electricity

Common surge protector found on base.



All electrical appliances must be Underwriter's Laboratory (UL) or Conformance European (CE) approved. **Chinese power strips are not approved and are prime causes of fires.** Remove them immediately and replace with a UL or CE item or power strip.



Flexible electrical cords run through doorways windows or outlets where the wiring can be crushed are subjected to abrasion and friction. They eventually short and cause a fire. Do not permit this practice; follow up to ensure compliance.

Source: MLG Safety/Environmental



Did You Know?

That there are more than 40,000 fires caused by bad wiring or improper use of electric cords and appliances every year in the U.S.

Strange as it may seem, most fatal electrical shocks happen to people who should know better. Here are some electro-medical facts that should make you think twice before taking chances. It's not the voltage but the current that kills. People have been killed by 100 volts AC in the home and with as little as 42 volts DC. The real measure of a shock's intensity lies in the amount of current (in milliamperes) forced through the body. Any electrical device used on a house wiring circuit can, under certain conditions, transmit a fatal amount of current. Currents between 100 and 200 milliamperes (0.1 ampere and 0.2 ampere) are fatal. Anything in the neighborhood of 10 milliamperes (0.01) is capable of producing painful to severe shock. As the current rises, the shock becomes more severe. **Below 20 milliamperes, breathing becomes labored; it ceases completely even at values below 75 milliamperes.** As the current approaches **100 milliamperes, ventricular fibrillation occurs.** This is an uncoordinated twitching of the walls of the heart's ventricles. Since you don't know how much current went through the body, it is necessary to perform artificial respiration to try to get the person breathing again; or if the heart is not beating, cardio pulmonary resuscitation (CPR) is necessary.

Readings		Effects	
Safe Current Values	1 mA or less	Causes no sensation, not felt.	
	1 mA to 8 mA	Sensation of shock, not painful; Individual can let go at will since muscular control is not lost.	
Unsafe Current Values	8 mA to 15 mA	Painful shock; individual can let go at will since muscular control is not lost.	
	15 mA to 20 mA	Painful shock; control of adjacent muscles lost; victim can not let go.	
	50 mA to 100 mA	Ventricular fibrillation, a heart condition that can result in death.	
	100 mA to 200 mA	Ventricular fibrillation occurs.	
	200 mA and over	Severe burns, severe muscular contractions - so severe that chest muscles clamp the heart and stop it for the duration of the shock. (This prevents ventricular fibrillation).	

Prevention is the best medicine for electrical shock. **Respect all voltages**, have a knowledge of the principles of electricity, and follow safe work procedures. **Do not take chances.** Everyone should be encouraged to take a basic course in CPR (cardiopulmonary resuscitation) so they can aid in emergency situations.

Always make sure portable electric tools are in safe operating condition. Make sure there is a third wire on the plug for grounding in case of shorts. The fault current should flow through the third wire to ground instead of through the operator's body to ground if electric power tools are grounded and if an insulation breakdown occurs.

First Aid For Electric Shock

A person who has stopped breathing is not necessarily dead but is in immediate danger. Life is dependent on oxygen, which is breathed into the lungs and then carried by the blood to every body cell. Since body cells cannot store oxygen and since the blood can hold only a limited amount (and only for a short time), death will surely result from continued lack of breathing.

Since the blood will, for a short time, contain a small supply of oxygen, the body cells will not die immediately. For a very few minutes, there is some chance that the person's life may be saved. The process by which a person who has stopped breathing can be saved is called artificial ventilation (respiration). The purpose of artificial respiration is to force air out of the lungs and into the lungs, in rhythmic alternation, until natural breathing is reestablished.

Artificial ventilation should be given only when the breathing has stopped. Do not give artificial ventilation to any person who is breathing naturally. You should not assume that an individual who is unconscious due to electrical shock has stopped breathing. To tell if someone suffering from an electrical shock is breathing, place your hands on the person's sides at the level of the lowest ribs. If the victim is breathing, you will usually be able to feel movement. Once it has been determined that breathing has stopped, the person nearest the victim should start the artificial ventilation without delay and send others for assistance and medical aid. The only logical, permissible delay is that required to free the victim from contact with the electricity in the quickest, safest way. This step, while it must be taken quickly, must be done with great care; otherwise, there may be two victims instead of one.

In the case of portable electric tools, lights, appliances, equipment, or portable outlet extensions, the victim should be freed from contact with the electricity by turning off the supply switch or by removing the plug from its receptacle. If the switch or receptacle cannot be quickly located, the suspected electrical device may be pulled free of the victim.

(continued)

Electrical Shock (continued)

The injured person should be pulled free of contact with stationary equipment (such as a bus bar) if the equipment cannot be quickly deenergized or if the survival of others relies on the electricity and prevents immediate shutdown of the circuits. This can be done quickly and easily by carefully applying the following procedures:

1. Protect yourself with dry insulating material.
2. Use a dry board, belt, clothing, or other available nonconductive material to free the victim from electrical contact. **Do NOT** touch the victim until the source of electricity has been removed.

Once the victim has been removed from the electrical source, it should be determined whether the person is breathing. If the person is not breathing, a method of artificial respiration is used.

Cardiopulmonary Resuscitation (CPR)

Sometimes victims of electrical shock suffer cardiac arrest or heart stoppage as well as loss of breathing. Artificial ventilation alone is not enough in cases where the heart has stopped. You should, at the earliest opportunity, take a course to learn the latest techniques used in CPR. The techniques are relatively easy to learn and are taught in courses available through the American Red Cross.

Source: Electrical Safety.com

Fire Extinguisher Ratings



Class A Extinguishers will put out fires in ordinary combustibles, such as wood and paper. The numerical rating for this class of fire extinguisher refers to the amount of water the fire extinguisher holds and the amount of fire it will extinguish.



Class B Extinguishers should be used on fires involving flammable liquids, such as grease, gasoline, oil, etc. The numerical rating for this class of fire extinguisher states the approximate number of square feet of a flammable liquid fire that a non-expert person can expect to extinguish.



Class C Extinguishers are suitable for use on electrically energized fires. This class of fire extinguishers does not have a numerical rating. The presence of the letter "C" indicates that the extinguishing agent is non-conductive.



Class D Extinguishers are designed for use on flammable metals and are often specific for the type of metal in question. There is no picture designator for Class D extinguishers. These extinguishers generally have no rating nor are they given a multi-purpose rating for use on other types of fires.

Types of Fire Extinguishers



Dry Chemical extinguishers are usually rated for multiple purpose use. They contain an extinguishing agent and use a compressed, non-flammable gas as a propellant.



Water These extinguishers contain water and compressed gas and should only be used on Class A (ordinary combustibles) fires.



Halon extinguishers contain a gas that interrupts the chemical reaction that takes place when fuels burn. These types of extinguishers are often used to protect valuable electrical equipment since they leave no residue to clean up. Halon extinguishers have a limited range, usually 4 to 6 feet. The initial application of Halon should be made at the base of the fire, even after the flames have been extinguished.



Carbon Dioxide (CO₂) extinguishers are most effective on Class B and C (liquids and electrical) fires. Since the gas disperses quickly, these extinguishers are only effective from 3 to 8 feet. The carbon dioxide is stored as a compressed liquid in the extinguisher; as it expands, it cools the surrounding air. The cooling will often cause ice to form around the "horn" where the gas is expelled from the extinguisher. Since the fire could re-ignite, continue to apply the agent even after the fire appears to be out.

Always use the correct fire extinguisher for the class of fire.



1. Once a bolt of lightning flashes toward the ground, it strikes the tallest object in a predetermined, 50-yard radius. In other words, it won't "look for" a tall tree that is 100 yards away from you.
2. If a bolt is going to hit near you, don't be the tallest thing within that 50-yard radius.
3. The only completely safe approach is to avoid being exposed.
4. Get inside a building if you can't, get in a car or truck.
5. If you are already in an exposed location when a storm hits, your options are limited:
 - ◆ Stay as low as you can, to avoid being the highest object.
 - ◆ Squat down, but don't lay flat. You don't want your whole body touching the ground if lightning hits nearby, because the current will spread outward.
6. If you're in the woods, avoid the tallest trees but stay away from clearings that are more than 100 yards across.
7. You can usually hear thunder 10 miles away, unless the noise of rain and wind interferes. When you see lightning, count the number of seconds until you hear thunder. Sound travels one mile every five seconds. Most experts recommend 30 seconds (6 miles) as the signal for you to stop what you're doing and get to a safe location.
8. The typical lightning threat lasts less than an hour.
9. Wait 30 minutes after you see the last lightning bolt or hear the last thunder before going back to golfing, fishing, or whatever else you were doing outdoors.
10. Water does not "attract" lightning, but it is a great conductor. Lightning has killed or injured people who were swimming, wading, fishing, boating and surfing. Since ponds and lakes tend to be cooler than nearby land during the summer, thunderstorms are less likely to build or continue to develop over them.
11. A car protects you from lightning because the lightning will follow its metal structure to the ground. But don't leave the windows down, because the lightning can jump or arc into the car.

Thunderstorms

Thunderstorms pose many hazards. They produce lightning and hail. Their torrential rains can trigger floods; their strong winds can create deadly tornadoes. You have to worry about them when they get to be "severe," which the National Weather Service defines as having winds of more than 57 mph and/or hail about the size of a marble. About 100,000 thunderstorms occur in the U.S. each year; 10 percent become severe. Every state has thunderstorms.

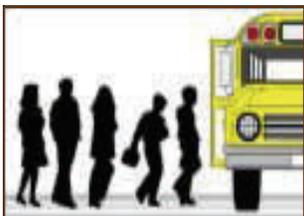
1. When it's your turn, stay tuned to the latest weather forecasts, and listen for watches and warnings for tornadoes and floods.
2. If the weather service issues a watch:
 - ◆ Tie down lawn chairs, picnic tables and trash cans, or bring them inside.
 - ◆ Park your car under an awning or inside a garage.
 - ◆ Close windows and draw the blinds or curtains. This precaution will lessen the hazard of flying glass if a window gets broken.
3. Listen to radio or television for warnings.
4. Just before and during the storm, count the seconds between seeing lightning and hearing thunder. If this time is 30 seconds or less, then the lightning is a threat. Seek shelter. After seeing the last lightning flash, wait 30 minutes before leaving shelter. More than half of the people killed by lightning died after the storm passed.

Source: Navy Safety Center



Did You Know?

The air around a lightning strike is about 54,000° Fahrenheit (30,000° Celsius), which is six times hotter than the surface of the sun.



**WATCHOUT FOR CHILDREN
SCHOOLS IS OPEN**



As a new fleet NFO, I was loving life. I had learned new tactics and had gotten to meet my squadron mates. However, I had paid a high price to get flight hours. As a result, I was sitting in the back of the comfortable and spacious Hawkeye for events, such as FCLPs (field-carrier-landing practices) and stan checks.

We were on "the same old instrument check" we always flew. As we read the book on 602, we noticed it had a history of giving bad landing-gear-status indications. The gear problem had been griped and drop-checked, but the indications repeated. The maintainers again fixed it, and we were on our way.

After takeoff, we headed to fly some approaches. As we descended and lowered the gear, we had unsafe indications. We were surprised but also were prepared. We canceled our request and pointed our collective nose toward home. We pulled out a PCL (pocket checklist) and went through the emergency procedures. We called base and requested they rig the arresting gear.

We were confident the gear was down and locked, but we didn't get the proper indications. We had another Hawkeye join on us and inspect our gear. They said it looked fine. Our discussions focused on the appropriate course of action. We figured we could land and let maintenance have a look.

As the NFO in the back, my job was to sit there and read the procedures out of the PCL. Because both pilots recently had seen this EP in this plane, I felt my efforts were unnecessary. As we went home, they decided to land without catching the wire, and I was fine with their plan.

I ASKED ONE MORE TIME to confirm the course of action, "So, we are not going to take the wire? What does that buy us?"

Out of ignorance, as a new guy, I expected an answer referencing some pub or instruction. Rather, I heard a sigh over ICS, and, "Well, I suppose we should take it. It's just a pain in the butt." The pilots had become fed up with this repeated gripe, and complacency had set in. In actuality, we probably were safe to land without the gear. We caught the wire, which was not as painful or drawn out as we had feared.

By my speaking up, we all had become more aware of the possible consequences and the safest course of action. Whether you are the new guy or the skipper, your voice has a place. Be assertive. The maintainers checked the plane later in the day and found no major malfunction.

Source: Approach Magazine

Additional Safety Links

Did You Know?



In conjunction with a proper emergency plan in place, smoke alarms can cut home fire-related death rates in half.

Oorah! Thanks for the advice sir and I'll remember to contact you for any article we would like to see in future newsletters. This is a great tool and I read them every month and share them with all Marines and Sailors.

S/F
1stSgt

MCCLL,
In regards to the "Swimmer's Ear" in the 10 summer bumper. There is a one (1) minute easy fix without a Doctor. It's safe and 100% effective. Take a cap of alcohol and put in the affected ear of swimmer while swimmer holds head to one side. i.e. right ear affected, tilt head to left with right ear up to the sky. After 1 minute hold head normally, the water and alcohol will drain.

Mr. Ian Watson
SSgt USMC (ret)

I share your Lesson's Learned Safety Briefs with my office suite mates. They do provide helpful information. While I am not an engineer, I am a 20-plus year AF vet. I was thinking about your issue with blockade assaults. While an item like the "Jaws of life" attached to the lead vehicle may help the vehicle get through whatever obstacle the adversary placed in the road; I also realize if it is loaded with explosive devices—the jaws of life could cause it to explode. Is there any way to retro-fit any of the vehicles with mandibles on armor-plating which push the obstacle out of the way? Thus eliminating the need for anyone to exit the vehicle? If it worked effectively enough, perhaps it would blow up the enemy versus a US soldier.

I do have some information that may help with the summer-time blues:

- a. For jelly-fish or man-of-war stings, meat tenderizer will also help relieve the sting/pain until professional help can be sought if needed. Simply make a "runny" paste with sea water and the meat tenderizer.
- b. Noxzema will cool a sunburn although an ounce of prevention is worth a pound of cure. There are also some aloe products available over the counter with lidocaine in them to help with the pain.

First, I really enjoy the monthly newsletter. It has been very informative and even though some of the information may not apply to my areas of responsibility there are areas that do, therefore the diversity of the information is outstanding. I am responsible for Asset Protection for MCCS-MCX HQ; one of the areas of course is safety, whether it is a general slip trip fall in the stores to office safety standards at Quantico. Recently, I have seen exercise balls being used as chairs in the workplace. I have done the research on the web, most of the articles are dated back to when I assume this was becoming a fad. Have you come across this, and, if so, what is the opinion or is there a regulation concerning the use of exercise balls in the workplace? I know that OSHA advises backrest, seat, armrest and base. I know this is a strange question, just looking for some advice as to how to approach.

MCCLL response

I wouldn't recommend using an exercise ball as a replacement for an ergonomic office chair, but if you must here are a few tips from The Office Rat to keep you safe:

- ◆ Be attentive and deliberate as you get on and off your exercise ball.
- ◆ Use an exercise-ball base to keep the ball from rolling around.
- ◆ Get a sturdy, burst-resistant exercise ball. Get the right size ball for your body. (Exact fit depends on your leg length, but generally if you are of average height (5'2"-6'2") a 65 cm diameter ball should work. If you are taller, get a 75 cm ball. If you are shorter, try a 55 cm ball or let some of the air out of a 65 cm ball.
- ◆ Inflate your exercise ball so that your hips are higher than your knees by just a bit when your feet are flat on the floor.
- ◆ Sit actively. Pull your belly button toward your spine.
- ◆ Roll your shoulders up and back and lift up your sternum.
- ◆ Have fun. Go ahead and bounce up and down from time to time.

Remember the inherent instability of a fitness ball makes it both a great exercise device and a potential safety hazard.

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SUBJ/SUMMARY OF MISHAPS//

GENTEXT/REMARKS/1. WELCOME TO THE LATEST FRIDAY FUNNIES. THIS WEEK WE TAKE AN EXTENDED SOJOURN HALFWAY AROUND THE WORLD FOR AN IN-DEPTH STUDY OF THE CONCEPT OF EXPER-TISE.

A. ON THE SOUTH SIDE OF A BASE IN IRAQ, POWER WAS SHUT DOWN, AND WHEN IT CAME BACK UP, ONE OF THE HEATING UNITS DIDN'T WORK. A RADAR TECHNICIAN, DESCRIBED IN THE MISHAP REPORT AS "ONE OF THE RESIDENT ELECTRICAL EXPERTS," TOOK A LOOK. HE CHECKED THE ERROR CODE IN THE MANUAL AND FOUND THAT IT SAID THERE WAS "SOMETHING WRONG WITH THE SEQUENCE OF THREE-PHASE OUTDOOR. PLEASE EXCHANGE ANY TWO PHASE OF THREE." TWO THINGS ABOUT THIS ADVICE. FIRST, THAT'S WHY I'M NOT AN ELECTRICIAN, AND WHY AN OCCASIONAL WALL SWITCH OR LIGHT FIXTURE IS MY LIMIT. SECOND, THAT SURE WAS A POLITE MANUAL.

B. THIS FELLOW, HOWEVER, WAS A SORT OF ELECTRICIAN, ALBEIT UNLICENSED. HE'D BEEN WORKING WITH AVIATION ELECTRICAL EQUIPMENT FOR A DECADE IN THE SERVICE, AND HE HAD BEEN AN ELECTRICIAN'S APPRENTICE FOR EIGHT YEARS BEFORE THAT, "HELPING TO WIRE HOUSES AND GARAGES," THE REPORT EXPLAINED. NOT SURE HOW MANY OF THOSE JOBS INVOLVED THREE-PHASE OUTDOOR, BUT THERE WERE TWO SALIENT POINTS REGARDING THE CURRENT ISSUE. FIRST, NORMAL WORK REQUESTS HAD BEEN TAKING WEEKS TO REACH FRUITION. SECOND, IT WAS FREEZING OUTSIDE. HE HAD FIXED SIMILAR PROBLEMS TWICE. HE FIGURED HE WAS QUALIFIED.

C. ONE OF HIS INITIAL ASSUMPTIONS WAS THAT THE CIRCUIT BREAKERS IN THE WALL PANEL HAD BEEN INSTALLED TO CODE. HE CUT OFF ALL THE CIRCUIT BREAKERS THAT APPEARED TO CONTROL POWER TO THE UNIT, AND HE DIDN'T TEST FOR CURRENT IN THE WIRES HE WAS WORKING WITH. HE UNSCREWED ONE OF THE PHASE WIRES AND PROPPED IT BEHIND SOMETHING SO THAT IT WOULDN'T TOUCH ANYTHING. HE UNSCREWED THE SECOND PHASE WIRE AND STARTED SCREWING IT INTO WHERE THE FIRST WIRE HAD BEEN CONNECTED. THIS WAS THE CUE FOR THE FIRST WIRE TO UNPROP IT-SELF, SWING OUT AND TOUCH HIS SCREW DRIVER.

D. ALL TOGETHER NOW: "BRRRZZZAAAPPP!" HE WAS TEMPORARILY BLINDED BY THE INITIAL FLASH. HE GOT KNOCKED BACK SEVERAL FEET, WHERE SOMEONE CAUGHT HIM. THE SHOP NONCOM-IN-CHARGE LED HIM TO MEDICAL, WHERE HE CHECKED OUT FINE.

E. THERE ARE LOTS OF PLACES I WOULDN'T ASSUME WIRING HAD BEEN INSTALLED ACCORDING TO CODE, EVEN HERE IN GOOD OLD NORFOLK, MUCH LESS OVER THERE IN A COMBAT ZONE. ANOTHER LESSON LEARNED IS TO TAKE A MINUTE AND CAP THAT EXPOSED WIRE INSTEAD OF STUFFING IT BEHIND SOMETHING. THOSE WIRES HAVE A MIND OF THEIR OWN.

2. THAT'S ALL FOR THIS WEEK, FRIENDS AND NEIGHBORS. I WAS GOING TO CLOSE WITH ONE OF MY FAVORITE TRUER-WORDS-WERENEVER-SPOKE QUOTES, NAMELY, "A LITTLE LEARNING IS A DANGEROUS THING," BUT OUR PROTAGONIST HAD BEEN WORKING WITH AND AROUND ELECTRICITY FOR 18 YEARS. AS ALWAYS, HERE'S THE QUESTION: IS THAT REALLY 18 YEARS, OR IS IT THE SAME YEAR 18 TIMES?//

USMC AVIATION CLASS A MISHAPS (includes AGMs not included in the Flight Slide)

05 May 09 AH-1W crashed with fatalities.
29 Dec 08 AV-8B crashed on PAR final approach, pilot died.

USMC GROUND CLASS A

24 Mar 09 (Okinawa) SSgt died as a result of a non-combat explosive ordnance disposal operation.
09 Mar 09 (Iraq) LCpl died from an negligent discharge of a weapon.
09 Feb 09 (Camp Lejeune) Sgt died after being struck in the chest by a ricochet bullet while pulling targets at the shooting range.

USMC PHYSICAL TRAINING CLASS A MISHAPS

17 Aug 09 (Parris Island, SC) Pvt died from cardiac arrest after completing 3 mile run.
14 Aug 09 (29 Palms, CA) LCpl died on 19 Aug 09 from heat related injuries sustained during a platoon run with boots, utilities, and flak jacket.

USMC OPERATIONAL MOTOR VEHICLE

16 Jun 09 (Camp Lejeune, NC) LCpl died in a HMMWV mishap.
19 May 09 (Camp Pendleton, CA) Cpl died in a HMMWV mishap.
28 Feb 09 (Iraq) Cpl died from injuries after being struck by a tactical vehicle.
23 Oct 08 (Hauula, HI) One civilian was killed when a 7-ton tactical vehicle collided head-on with civilian vehicle.
09 Oct 08 (Afghanistan) Cpl died in a HMMWV mishap when the vehicle rolled over while he was in the turret gunner position.

USMC PRIVATE MOTOR VEHICLE FATALITIES

13 Sep 09 (San Diego, CA) Cpl died in a motorcycle mishap after losing control in a turn.
12 Sep 09 (Jacksonville, NC) LCpl died after being struck by a motorcycle while walking along a road.
19 Aug 09 (La Mesa, CA) Sgt died in single motorcycle mishap when he hit a guardrail.
01 Aug 09 (San Clemente, CA) Cpl died when the vehicle in which he was a passenger struck a tree.
19 Jul 09 (Whittier, CA) Sgt died when the vehicle in which he was a passenger struck a tree.
05 July 09 (Palmdale, CA) PFC died in a automobile mishap while traveling at speeds reported in excess of 100 mph.
13 Jun 09 (Helechawa, KY) Pvt died in a motorcycle mishap.
05 Jun 09 (New Bern, NC) Cpl died in single vehicle rollover.
31 May 09 (Jacksonville, NC) Sgt died when his vehicle overturned, and he was thrown from the car.
17 May 09 (Jacksonville, NC) PFC died in an automobile mishap.
10 May 09 (Yuma, AZ) Pvt and LCpl died and an PFC was in critical condition as a result of a single vehicle mishap.
05 May 09 (Jacksonville, NC) Cpl died in an automobile mishap.
28 Apr 09 (Yucca Valley) Maj died when his motorcycle struck a turning vehicle.
24 Apr 09 (Independence, MO) Pvt died when his motorcycle struck the back of a tractor trailer.
13 Apr 09 (Freedom Township, Blair Co, PA) Sgt died when his vehicle departed the roadway.
10 Apr 09 (Sneads Ferry, NC) SSgt died in an automobile mishap when he collided head-on with another vehicle.
04 Apr 09 (Riverside/San Diego County Line, CA) LCpl died in a motorcycle mishap when he collided with an oncoming vehicle.
01 Apr 09 (Kendall County, TX) LCpl died in a single vehicle mishap.
28 Mar 09 (Spartanburg, SC) PFC driver and LCpl passenger died in a single vehicle mishap.
24 Mar 09 (Westover, MD) LCpl died in an automobile mishap when vehicle left the road and struck a tree.
22 Mar 09 (Japan) SSgt died when the moped he was operating hit a curb, and he was thrown from the vehicle.
18 Mar 09 (Marietta, GA) Sgt died when he lost control of his motorcycle.
15 Mar 09 (Mt. Carmel, IL) Cpl died in a single vehicle automobile mishap.
05 Mar 09 (Reading, PA) SSgt died when his vehicle struck a utility pole.
14 Feb 09 (Oceanside, CA) Cpl died in a motorcycle mishap.
31 Jan 09 (San Diego, CA) LCpl died when her vehicle went out of control, struck a barrier and caught fire. Speed was a factor.
20 Jan 09 (Milton, PA) Two PFC died and one PFC was critically injured when their vehicle crossed over the median into oncoming traffic.
15 Jan 09 (Sneads Ferry, NC) Cpl died in a motorcycle mishap when he lost control of the motorcycle and collided with an oncoming vehicle.
13 Jan 09 (Salton City, CA) Cpl died in a motorcycle mishap when he failed to negotiate a turn and he departed the roadway.
27 Nov 08 (Greeleyville, SC) SSgt died when his vehicle ran off the road, and he was ejected from the vehicle.
22 Nov 08 (Vista, CA) Two LCpl died in an automobile mishap when their vehicle struck a tree and caught fire.
08 Nov 08 (Arlington, VA) PFC died when he was struck by a vehicle while walking on a highway.
03 Nov 08 (Pensacola, FL) PFC died in a motorcycle mishap when he lost control and struck a tree.
02 Nov 08 (Jacksonville, NC) LCpl died when the vehicle in which he was a passenger struck a parked car and flipped.
17 Oct 08 (Phoenix, AZ) GySgt died in a motorcycle mishap when he ran into the side of a vehicle that failed to stop at a red light.

USMC OFF-DUTY/RECREATIONAL FATALITIES

23 Aug 09 (Vista, CA) Cpl died after collapsing in his residence.
21 Aug 09 (Springfield, IL) PFC died in an ATV mishap when he struck a parked trailer.
04 July 09 (Winterhaven, CA) LCpl drowned after being caught in an undercurrent while swimming in the Colorado River.
27 Jun 09 (Rocky Point, NC) PFC drowned while on camping trip.
14 Jun 09 (Huntington Beach, CA) Cpl died in a recreational swimming mishap.
03 May 09 (Cortland County, NY) Pvt found dead at a friend's home after night of drinking.
07 Mar 09 (Imperial Sand Dunes, CA) Cpl died in an ATV mishap.
14 Dec 08 (Fallbrook, CA) Cpl died from excessive consumption of alcohol.
23 Nov 08 (Edith Falls, Australia) LCpl died in a recreational swimming mishap.
11 Nov 08 (Spring Hill, FL) LtCol died in a recreational scuba diving mishap.
08 Nov 08 (Onna, Japan) Cpl drowned while snorkeling after experiencing rough water conditions.
02 Nov 08 (Phoenix, AZ) Cpl died when a shotgun discharged as he was retrieving it from his vehicle.
13 Oct 08 (Camp Lejeune, NC) PFC died from excessive consumption of alcohol.
09 Oct 08 (Port Richie, FL) LCpl died from excessive consumption of alcohol.

USN AVIATION CLASS A MISHAPS (includes FRMs not included in the Flight Slide)

- 19 May 09 HH-60H crashed in the water. 3 fatalities and 2 SAR at this time.
04 Oct 08 F/A-18F struck a Sailor on flight deck during catapult launch. 1 fatality. (FLT REL)
04 Oct 08 Helicopter struck tailboom of lead helicopter during landing resulting in hard landing and rollover. 1 non-DOD fatality.

USN AFLOAT CLASS A MISHAPS

- 08 Jul 09 PO1 died when he fell overboard while rigging shore power cables prior to entering port.
07 May 09 CPO died during dive training evolution.
24 Apr 09 PO3 died while performing ship maintenance.
04 Feb 09 SVCNMN lost at sea when RHIB flipped while being lowered into the water when tending line became hooked on crane cable. 2 of 3 Sailors safely recovered.

USN SHORE CLASS A MISHAPS

- 03 Jun 09 (Coronado, CA) DON civilian died after falling approximately 30 feet while assisting with an HVAC repair.
18 Jun 09 (Yuma, AZ) PO1 died during night MFF Jump Master course. NSWG
17 Feb 09 (Ft. Jackson, SC) CMD died in a training mishap.
25 Dec 08 (Bahrain) Navy RHIB collided with a moored barge resulting in 1 fatality and 2 injuries.

USN PHYSICAL TRAINING CLASS A MISHAPS

- 27 Apr 09 (Mayport, FL) PO2 collapsed and died during command sponsored PT.
30 Jan 09 (Naples, IT) CAPT died shortly after complaining of stomach pain during semi-annual PRT.

USN PRIVATE MOTOR VEHICLE FATALITIES

- 12 Sep 09 (Hampton, VA) PO3 died when his motorcycle struck a vehicle backing out of a driveway.
05 Sep 09 (Colchester, CT) PO3 died in a single vehicle mishap when the vehicle in which he was a passenger struck a tree.
21 Aug 09 (Kamehameha Hwy, HI) PO3 died in a bicycle mishap as a result of a head-on collision with a truck.
17 Aug 09 (Escondido, CA) PO2 died in motorcycle mishap after striking oncoming vehicle.
08 Aug 09 (Norfolk, VA) PO2 died in a single motorcycle mishap.
06 Aug 09 (Bethesda, MD) Foreign Exchange Officer, LCDR struck and killed by a car while crossing the street.
18 Jul 09 (Monterey, CA) PO3 died when the motorcycle on which she was a passenger struck a motor home.
05 July 09 (Augusta, ME) PO1 died in a motorcycle mishap after striking oncoming vehicle while participating in a group ride.
04 July 09 (Quincy, MA) SN died after running a red light causing a multiple vehicle mishap in which both front seat occupants were ejected.
26 Jun 09 (Virginia Beach, VA) PO2 died in single vehicle mishap when automobile flipped and SNM was ejected.
24 Jun 09 (Chula Vista, CA) PO3 died in a single vehicle mishap.
20 Jun 09 (Virginia Beach, VA) PO1 died in a motorcycle mishap.
15 Jun 09 (Fresno, CA) SN died in a single vehicle mishap.
22 May 09 (I-5 near Camp Pendelton) Seaman died in single vehicle mishap.
09 May 09 (Lee, NH) PO2 died in an automobile mishap when an oncoming vehicle crossed centerline and struck head-on.
05 May 09 (Torrance, CA) PO1 died in single vehicle rollover.
26 Apr 09 (Kettleman, CA) PO3 died in an automobile mishap when she was struck head-on by another vehicle.
23 Apr 09 (Green River, UT) PO2 died in automobile mishap when he collided with a tractor trailer.
03 Apr 09 (Norfolk, VA) ENS died in a motorcycle mishap.
14 Mar 09 (Salerno, IT) PO2 died in a motorcycle mishap.
07 Mar 09 (Norfolk, VA) PO3 died when his motorcycle struck another vehicle.
02 Feb 09 (Tulare County, CA) PO3 died when his car was struck by a drunk driver traveling northbound in southbound lane.
01 Feb 09 (San Bernardino, CA) PO3 died when his car was struck from behind and caught fire.
10 Jan 09 (Ojai, CA) PO1 died in a motorcycle mishap when he drifted over the center line and collided with an oncoming vehicle during a group ride.
03 Jan 09 (Lafayette, LA) SN died when his vehicle rolled over into water and submerged.
07 Dec 08 (San Diego, CA) PO3 died when his vehicle departed the roadway while negotiating an interstate on-ramp. Alcohol was a factor.
15 Nov 08 (Nassau, FL) PO3 died when the vehicle in which he was a passenger veered into the median barrier, and he was ejected from the vehicle.
08 Nov 08 (Big Bear, CA) CW05 on terminal leave died when his cruiser motorcycle drifted into oncoming traffic while rounding a curve.
10 Oct 08 (Boron, CA) PO3 died in an automobile mishap when he swerved into oncoming traffic and collided head-on with another vehicle.
05 Oct 08 (Spring View, CA) PO2 died from injuries sustained in a motorcycle mishap.
01 Oct 08 (Kleberg County, TX) LT died when he was struck by an automobile while riding his bicycle.

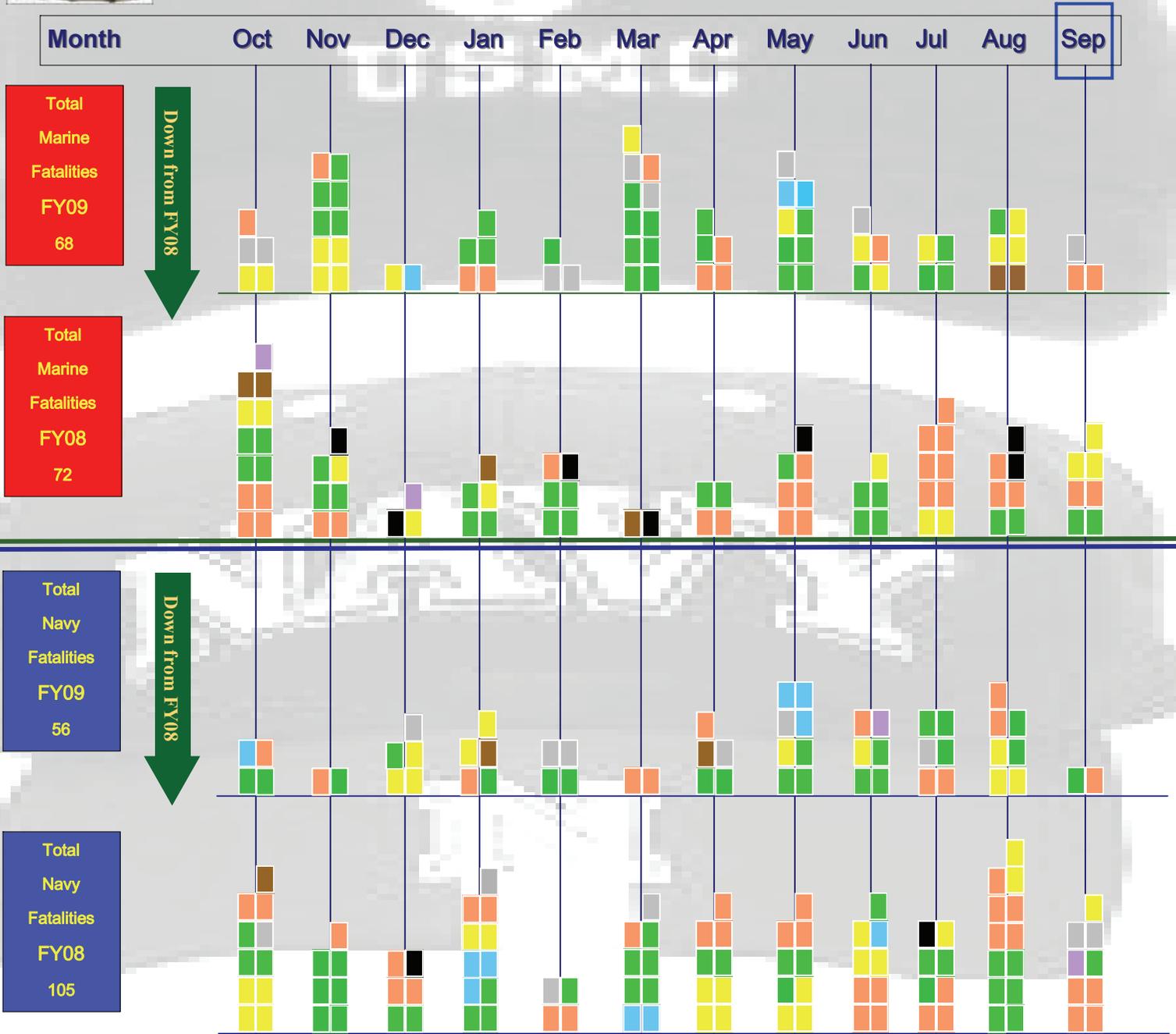
USN OFF-DUTY/RECREATIONAL FATALITIES

- 09 Aug 09 (Great Lakes, IL) SA died on 15 Aug of complications from a swimming accident.
08 Aug 09 (Kentucky) SN drowned after diving into the water and failed to resurface.
01 Aug 09 (Kingsland, GA) PO2 drowned after falling out of a small pleasure craft.
28 Jun 09 (Lake Luzerne, NY) PO3 died in a recreational swimming mishap.
22 May 09 (Fallon, NV) CDR died in civilian light airplane crash.
04 Jan 09 (Gaeta, IT) PO1 died from accidental carbon monoxide poisoning.
01 Jan 09 (Lakeside, CA) CPO died from hypothermia.
28 Dec 08 (Lombard, IL) SA died after being hit by freight train while walking on tracks.
27 Dec 08 (Grand Bland, MI) SA died after being found unresponsive after a night of drinking.
23 Dec 08 (Pace, FL) CAPT died from fall while trimming a tree.

Fatality Summary as of September 09



Be strong, courageous, and observe the laws and you will find success.



Note: This report has been compiled from publicly available information and is not official USMC policy. Although information has been gathered from reliable sources the currency and completeness of the information reported herein is subject to change and cannot be guaranteed.