



# Safety Gram

Protecting Resources Through Better Risk Management

Safety Division's Monthly *Safety Gram* is provided to senior leaders to maintain awareness of mishap trends that directly affect the operational readiness of the Corps. This information should also be disseminated at every level of your command to assist high-risk Marines and Sailors in understanding the impact of the decisions they make every day both on and off-duty.

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## November 2014: Mishap Summary

*The Mishaps below occurred throughout the USMC from 1 October to 30 October, 2014, causing serious injury or death to Marines, and/or damage to equipment.*

**1 October 2014.** A MV-22 lost engine power while attempting to take off. It descended into the water, but was able to regain power and return to the ship. When the aircraft hit the water, both crewchiefs jumped into the water. The unit obtained conclusive evidence that one Marine – originally classified as missing – is dead. Search and rescue efforts have been suspended and an investigation has been initiated.

**1 October 2014.** SNM experienced tissue damage (Compartment Syndrome) in SNM's lower left extremity due to a blunt force injury. SNM will be required to wear a brace indefinitely in order to walk.

**5 October 2014.** SNM was involved in a motorcycle accident while on liberty. SNM received a traumatic brain injury and blunt chest trauma and died from his injuries.

**11 October 2014.** SNM was killed after being ejected from a vehicle during a single motor vehicle accident. One civilian passenger was also killed and one Marine passenger was injured in the accident.

**13 October 2014.** While conducting defensive tactics in a training area, an ALQ-99 pod departed the aircraft, causing damage to the left wing. The value of the pod exceeds \$2.5 million.

**14 October 2014.** While conducting ground turns on an AH-1W, the rotor brake caught fire causing an estimated \$2 million in damage. No personnel were injured. The unit has initiated a mishap board investigation.

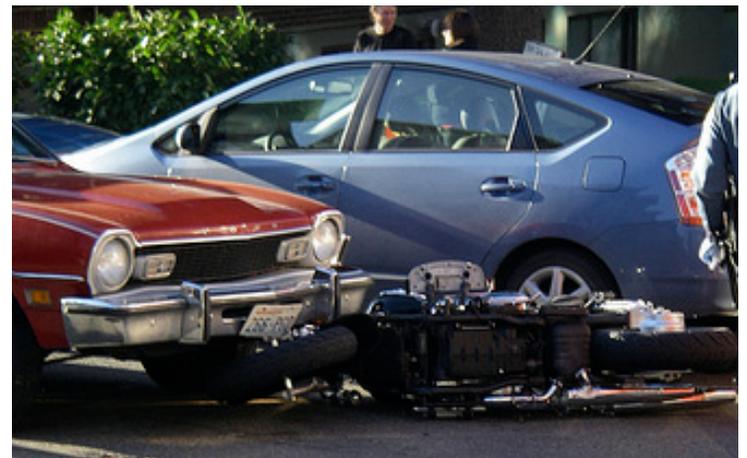
**21 October 2014.** SNM on leave died from injuries sustained in a single-vehicle automobile accident. SNM's brother died in the crash as well.

**21 October 2014.** SNM was conducting post operational checks on an LAV-logistics variant, while in a static position. He was reaching over the driver's seat into the driver's compartment when the pressurized air that controls the stroking driver's seat was released, driving it up, pinning him between the seat and the hatch. A Marine and two corpsmen arrived and promptly removed him from the vehicle. First aid was rendered; CPR was performed before EMTs arrived. EMTs rendered further aid then conducted ground MEDEVAC to a nearby hospital. The attending physician pronounced him dead and identified the cause of death as traumatic asphyxiation.

**24 October 2014.** After an evening out at local bars, SNM became uncooperative with the designated driver (DD) and departed the vehicle due to a disagreement. Upon returning back to the barracks, the DD reported the incident to the OOD. The unit notified State Police. State Police found SNM dead alongside the road.

**26 October 2014.** SNM lost all fingers on the left hand, except for the index finger, in a fireworks mishap. SNM received treatment at a local medical facility.

**29 October 2014.** SNM was returning from a training event in a government-rented vehicle and struck a pedestrian. SNM aided the pedestrian until EMS arrived. The pedestrian was pronounced deceased. Preliminary findings by local law enforcement found SNM not at fault.



# Ground Safety over FY2014

Marines and Sailors, as we look back on Fiscal Year 2014 the number of Class A and B ground mishaps (on-duty) significantly decreased from 2013 but still resulted in the deaths of (9) Marines and (1) civilian. Better risk analysis, mitigation, and supervision likely contributed to our ability to conduct the same amount of training with fewer mishaps. Losing an entire platoon of Marines during routine training would be a catastrophic event, yet this many Marines (43) were killed performing the daily tasks of driving a car (18), riding a motorcycle (14), or during other recreational activities (13). Leadership at all levels must not assume away the risks inherent in our daily routine and apply the same analysis, controls, and supervision to ensure our Marines are alive and ready to respond when called. Lance Corporals suffered the greatest number of casualties. We must be conscientious mentors to these young, hard-charging Marines, equipping them with the skills, judgment, and tools necessary to keep them in the fight. How can we combat the risks at home?

1. Conduct “knee to knee” detailed mission (trip) planning and risk analysis with junior Marines before long distance drives.
2. Ensure they have the proper skills and PPE, and that the equipment is in good condition for driving and riding.
3. Use the Force Preservation Council and Safety Officers to look at preconditions within the unit and tailor safety efforts towards your Marines.

Another, often neglected, tool in mishap prevention is submission of the Hazard Report.

With new equipment, variants, and modifications proliferating across the Corps today, Marines are encountering new hazards that have caused mishaps ranging from minor injuries to death. Aggressively reporting these hazards in WESS or via email to CMC(SD) Ground Branch can provide leverage to support modification, replacement, or acquisition of equipment that reduces hazards for our Marines. Don't wait for a mishap investigation to address the need for corrective actions.

Semper Fi,

Maj Matthew Gioia  
Maj David Walker  
Maj Jon Erskine



# Aviation Safety Annual Roll-up

Greetings and Happy New Fiscal Year! Aviation Branch wanted to take some time and pass on a roll-up of the Fiscal Year 2014 aviation mishaps. FY14 showed a few interesting trends. First, the Class A and B mishaps remained relatively constant, comparatively speaking over the last 12 years (six Class A mishaps, ten Class B mishaps). The Class C mishaps showed a fairly dramatic rise in occurrences (46). Looking at the mishap rate holistically, the USMC compiled a combined mishap rate of 23.8 mishaps per 100,000 flight hours. This put the FY14 total at 59 reported aviation mishaps. This is the highest number of reported mishaps in the last 12 years. This could be a function of a few different things.

1. We are committing more mishaps
2. A more candid reporting culture is developing in the aviation community
3. The price of aircraft and components has gone up (aluminum skin vs. composite material, for example)

Our opinion is that it is a combination of all three factors, coupled with the fact that the Marine Corps, over the past ten years, has transitioned – and continues to transition – every TMS while conducting combat operations. This isn't to say that we are not identifying risks and managing those risks, but it is a change. We are also seeing new types of aircraft, UAS' for example. Transitioning a fleet while maintaining combat operations, conducting MEU deployments, and daily training exercises presents its own set of unique challenges. Add into the mix a new concept of deployment for the

USMC, the SP MAGTF CR. This is a new paradigm and concept that comes with its own challenges. Not to mention, a draw-down of personnel is occurring. Change gives birth to risk, but not all change or risk is detrimental to the mission. As long as risk is identified and mitigated properly, it can be a combat-multiplier.

We have to ask ourselves, what is new today? What is different today? Am I trained to do what I am tasked with? Am I equipped to do what I am tasked with? The days of the ORM and safety slides being the last power point slides of the brief are gone. Risk mitigation starts in mission planning, not after it is completed. It starts with an internal look: “Am I ready to go today?” and flows all the way up to the command level. All aviation Marines (aircrew, maintainers, and support Marines) are empowered and implored to stop something if it is not right. It does not matter if you are driving to work, flying, work in the S-shops, or turning wrenches. Everyone has the power to identify, and stop, an unsafe situation.

Fly safe and stay frosty...

Semper Fidelis,

LtCol Bradley “Jar Jar” Trager  
CDR Leslie “Wood” Kindling  
Maj Graham “COTTO” Sloan  
LCDR Jeffery “Half-Life” Delzer



# CARBON MONOXIDE

## What Marines need to know about this silent, but deadly, threat.

Many of the dangers that confront Marines are very obvious. Some of those include – but are certainly not limited to – crunching car crashes, perilous falls from substantial heights, buzzing power tools, and mis-managed firearms. Similarly dangerous are a number of threats that aren't easily detected or identified. One of those invisible menaces is especially difficult to recognize, particularly because it cannot be seen, smelled, heard, or readily sensed without the necessary tools.

That danger, which becomes more and more troublesome as cold weather persists, is carbon monoxide poisoning. Despite it being silent and unseen, high levels of this fuel by-product has the potential to kill a person within minutes of exposure. Carbon monoxide (CO) occurs whenever fuel such as gas, oil, kerosene, wood, or charcoal is burned. Properly utilized and maintained appliances typically do not produce hazardous amounts of CO, but any systems that are used or managed correctly can very well create dangerous levels of this gas.

So from where, exactly, does carbon monoxide come? As stated, CO is a by-product of incompleting combustion of a fuel source, which can include anything from wood to propane. Many common household appliances can produce the gas, including furnaces, water heaters, clothes dryers, space heaters, fireplaces, and garaged automobiles. The winter season in particular increases the risk of CO with many of the above-listed items being used regularly, or at an increased rate, due to cold weather. Running a furnace with an improperly-functioning vent or warming up your vehicle by letting it run in the garage are just two of many common, hazardous situations involving carbon monoxide.

If exposed to CO, individuals can experience an entire spectrum of symptoms, from mild to severe. Minor or moderate exposure can cause you or your family to suffer severe headaches, dizziness, confusion, faintness, or nausea. Breathing in low levels of carbon monoxide over an extended period and high exposure for a brief duration can both ultimately result in death. Part of the trouble with diagnosing CO poisoning based on the symptoms is that many simply mirror those of the flu, food poisoning, or other less-threatening ailments.

In order to prevent CO poisoning, one of the most important measures is to properly maintain appliances. A seemingly harmless utility, such as a clothes dryer that doesn't receive proper maintenance can begin to generate dangerous levels of carbon monoxide. As an example of identifying a threatening appliance, a gas stove should create a pilot/ignition light that is blue in color, indicating sufficient oxygen and fuel combustion; but a yellow flame would suggest that the combustion is incomplete attributing to lack of oxygen or a poor

fuel/air mixture.

Additionally, common sense should be used in regard to idling cars. Leaving an automobile running the garage, even with the garage door open, can result in a large amount of CO gas being created and pulled into the house.

Some common sources of carbon monoxide included, but go beyond, the following:

- Furnaces
- Gas stoves
- Space heaters
- Clothes dryers
- Fireplaces
- Generators
- Gas/charcoal grills
- Water heaters
- Garaged vehicles

Since exposure is difficult to detect and the symptoms of CO poisoning can be somewhat ambiguous, it's important to have and maintain carbon monoxide detectors in your home. This unit operates independent of a smoke alarm, and generally costs between \$30 and \$95. Carbon monoxide detectors should be placed away from bathrooms, furnaces, and fireplaces – which can trigger the alarms incorrectly – and distanced from your smoke detector – where the alarm or signals could be confused. Alarms typically emit a steady tone or intermittent warning tones, indicating high to low levels of exposure, respectively. The latter, less urgent signal may also indicate low power in battery-operated detectors.

Newly purchased carbon monoxide detectors should be indicated as having the Underwriter Laboratories (UL) listing (UL 2034), which indicates meeting best practice standards effective as of October 1995. Consumer Report studies can also indicate safe, effective models for purchase. Once installed, after carefully following the instructions provided, alarms should be tested once a month and be certain to replace them when necessary.

If a CO detector alarm sounds, and if anybody present exhibits symptoms, it's important to immediately exit the house to get fresh air, and to call 9-1-1 (or other appropriate emergency line). Individuals should not re-enter the house until it's been aired out and the CO source has been corrected. Should nobody have relevant symptoms, turn off all combustion sources, air out the house, re-set the detector, and have your utilities checked by a professional.

