



**Safety is Hard.** My friend Wilson Bateman of Global Training Edge uses these words in his book: 7 Safety Habits.

If you just stop and think about it for a minute, he is absolutely right. **Safety is hard** and that's why we come up with, often, very unsafe short cuts. Let's take the present Covid-19. Its older

brother which earned the name the "Spanish flu 1918" even though it never started in Spain, killed somewhere between 20 and 50 million people; 675 thousand of them in the United States. Over 500 million caught this flu which was about 1/3 of the world's population at the time. The average flu kills approximately 250,000 to 500,000 people worldwide per year with the US contributing about 3,600 to 49,000 per year to this number. To date (end of April) this virus has killed well over 60,000 in the US and may be just getting started. The virus spreads mainly by person to person and has a BRN (Basic number that a single person is likely to spread to others) of 2 to 5. Measles had a number of 15 to 18, while Polio, which my mother caught when I was a kid, had a number of 5 to 9. With all these statistics the world knows that to keep the virus from spreading; people must be kept separated. But some people will gather in parks and beaches and demand their "freedom." Why? Because **Safety is Hard**.

On a more personal note, I skydived in my younger days.

I was given about an hour's training with the key being to always: "Arch one thousand." "Look one thousand."

"Reach one thousand," "Pull one thousand." If you did that four static line jumps in a row, you were on your own. When you went to pull the ripcord that your life depended on, you were to bring both hands in to maintain stability.



I, being "smarter" than the average jumper, found I could reach in and pull the ripcord so fast that I didn't need to look or bring the other hand in. By the way it takes about 12 seconds of freefall to reach a terminal velocity of about 120 mph in a stable freefall. Each jump was higher and faster up to terminal velocity. On my 13<sup>th</sup> jump I was at terminal velocity when I reached for the ripcord with my superfast no look method and grabbed the harness instead. With one arm out I

started rolling and was still rolling when I finally pulled the ripcord. The end result was a “May West” (got that name because it looked like a big brasserie like I’d suppose she had in the silent movie era) parachute of about 8 ft. diameter. That slowed me down to about 60 mph and give me more time to open the reserve. Why didn’t I do as I was taught? **Safety is Hard** and what I was doing was easier. Rules are often written in blood. Thankfully it wasn’t mine.

Where you often see Safety shortcut’s being taken is in the wearing of PPE (Personal Protective Equipment). Ever see someone cutting their grass wearing flip-flops? Ever ground something on a grinder (not aluminum I hope) without wearing a face shield or goggles? What’s wrong with grinding aluminum? It sticks to the grinding wheel and with a high coefficient of expansion it can expand enough in a grinder pore to cause it to crack and explode in your face. I have seen a learner doing just that and stopped him before he wore it. That face shield could save your life or at least your face but if it’s not handy have you ever just looked away as you ground your metal because **Safety is Hard**.

There is an old adage: When a pilot makes a mistake; the pilot dies. When maintenance makes a mistake; the pilot dies. All too often, so does everyone with him and the maintainer also except he is doing to take longer to die. Read: “The Price of a Mistake” video storyline on our website [www.system-safety.com](http://www.system-safety.com) - Safety Videos to understand what I mean.

I have one more “war story” in which my working partner was about one foot from death. Luck was all that saved him or perhaps divine intervention.

We had seven old DC8s that were getting “long in the tooth” and with about 50,000 hours each of hard flying they had a tendency to leak fuel. Our crew had the job of stopping the leaks. The problem with integral fuel tanks is it would drip fuel out at one place but the leak could start many feet away in the tank sealant. The fuel would be cross-fed to another tank and circuit breakers pulled and tagged. A venturi device was attached to one of the tank panel openings and a low pressure was created in the tank. Red penetrant dye was sprayed where the leak dripped out and on entering the tank you would find where the leak started from the red dye that had been sucked in. A strong magnet was held on the outside where the leak exited and a small handheld magnet found that location inside the tank. The job now was to replace the sealant between those two points. All panels were opened up and air was pumped into the tank, As I was the smallest of the crew, I was “volunteered” to go into the tank to do the job while a crewmate stayed by the

nearest panel opening to hand down tools and keep watch. These were the good ole days so you went in in special no pocket coveralls only because there were little pools of fuel everywhere and you were going to get soaked in JP4 before you crawled out. I remember thinking that they should have a Safety rope around my ankle in case I got stuck. As I was working I suddenly heard a loud J\_\_\_\_s C\_\_\_\_t and a lot of commotion outside the tank. I got myself turned around and popped my head out of the hole. There was my work mate as pale as a ghost and right beside him was a ground spoiler sticking straight up. He had been on that panel moments earlier getting a can of sealant for me from the tool tray with the counted tools we needed. The tool tray was gone. When the panel came up it threw that tool tray over the wing and onto a support pillar about 20 feet in front of the wing. Tools, sealant and the tray came raining down on a portable table with the task card stand on it. Again moments earlier there had been a couple of crew there signing off completed cards and picking up new task cards. No one was hurt but the potential for a fatality was very high. It seems that they were working on the spoiler's mate on the left wing and that crew member was looking out the captain's window never thinking to check the right wing before pulling the spoiler lever. We never thought to tag the spoilers and they never thought to check the spoiler's other wing mate. **Safety is Hard.** If either of us had taken a "Minute for Safety," this very near chance of multiple fatalities might have been avoided. In that minute simply ask yourself just two questions: 1. What can possibility go wrong? 2. What can I do to mitigate the possibilities of something going wrong to ALARP? (As Low As Reasonability Possible) Having "dodged the 8 ball" that time, the work sheet was changed to include tagging the ground spoilers any time we were working on the wing and no flight control was to be moved until BOTH were checked as clear and the person yelled "Clear whatever the control was." As I've said many times, rules and regulations are all too often written in blood. Thank goodness this one wasn't one of them. Always keep in mind that **Safety is Hard.**