



Taking **just a minute for Safety** can reduce errors and save lives. All of us have made errors that upon looking back have thought, “Why the h... did I do that”? What is usually meant is why the h... didn't I take into account that this could happen?

Just look back at #58 Feb 2021 and reread how a very experienced AMT/AME kept adding air to a tire that had a tiny piece of masking tape over the inside of the valve stem. I'm sure he looks back and asks himself: why didn't I just take a minute to think this through? What is going on here? Something's not right.

Where has all that air gone? I don't hear it leaking out so it still has to still be in the tire. I could perhaps phone the guy who worked on the rim last night but he is likely still sleeping. What if after I remove the valve stem core and there is still no escape of air perhaps I should push a wire up the valve stem? His future life could have been so much better if he had only taken that minute for Safety to think the problem through.

What about the AMT/AME in “The Price of a Mistake” Safety video #6? (You can read the case study at our website www.system-safety.com) He stopped tightening a fuel line to help an apprentice. A short 30 seconds more would have completed the tightening of the fuel line before going to help. He didn't even need a minute to prevent the accident that would kill seven people and destroy his life.

How many times have we read how a pilot loses an engine on a twin-engine aircraft and shuts down the wrong engine? That occurred in the UK when two very experienced pilots shut down the wrong engine on a near new Boeing 737-400. I wondered, as did many of my fellow investigators at the time, how that could possibility happen with two pilots both making the wrong decision. 47 people died and 74 more were injured when the sick engine failed to make it to the airport. What also intrigued us was all the passengers and cabin crew on the left side of the aircraft could see flames and parts coming out of the left engine but no one tried to alert the pilots. That was a case of just taking that minute or less before reacting to ensure the action to be taken was the correct one. It would have made all the difference. If you recall back in Articles #39 to #41 Feb to April 2019, we learned that the subconscious (Child in our model) is the first to react and bases all of its decisions on emotions, Early Life Decisions (ELD) and habit: **not** logic or rational thinking. I recall a Sikorsky S76 accident (Transportation Safety Board investigated) that suffered an engine failure not long after take-off. The Captain immediately lowered the collective, rolled off the throttle and auto-rotated into “undesirable terrain” straight ahead that all but destroyed the aircraft; luckily no one was injured. As the aircraft ground to a stop they Captain observed that one engine was still running. The aircraft was quite capable of flying on one engine but due to his habit of flying a single engine aircraft he reacted as he was in the habit of doing (but in a single engine aircraft). Again, taking that minute or less would have saved the aircraft and likely his job. Thus, there are times in our lives when just taking the time to take a deep breath can help ensure that you are doing the right thing.

When investigating an accident I always took a final minute to go over my list of things to do as well as any anomalies I had come across to ensure I had missed nothing. There would be little chance to return to the scene if I had failed to photograph a part that would later become important in the investigation. You must be sure that the rational and not the emotional mind is making the best logical decision.

Unlike pilots we are very seldom called upon to make a split second, life depending decision, however we still make errors that had we taken just a little time to think of possible consequences an undesirable event could have been avoided.

I was working on the fuel system on the number one engine on a 727 and asked the person working with me to go to the cockpit and pull the #1 fire handle in order to shut off fuel to the engine. With the cowls open I was looking for the fuel component we had to change when all hell broke loose. I was surrounded in a white fog that cut off any hope of breathing or even seeing. I was about to jump about 8 feet off of the hydraulic lift platform but took a second and lay flat on the platform while holding my breath. As the "smoke" was clearing my fellow worker showed up and wondered what I was doing laying down on the job. He had accidentally turned the pulled fire handle and blew one of the fire bottles into the engine cowling. Had I jumped while blinded by the extinguishment there is a very good chance that I would have been in a world of hurt. To jump was my first thought but that extra second provided a much Safer option.

An area that really needs that short period of time is always accounting for ALL your tools at the end of each and every job. As I have recounted before, I left a flashlight wedged in some hydraulic lines in a wheel well of an aircraft that departed to haul fuel drums away from our base for two weeks. When I did my tool check I noted that I had my old flashlight in hand and forgot about the new mag-light I'd used earlier. There was no bad outcome but the potential was there and just stopping for that short minute would have saved me two weeks of sleepless nights praying that the wayward light didn't shake loose and jam the gear somehow. Why didn't I report it as soon as I realized the problem like I wanted to? There was no just culture in that company at that time and any mistake made resulted in being fired so as to set an example for the others to "be more careful." Losing your job there meant having to leave the country with your family as they sponsored you to be there and provided the housing, etc. that you would also lose.

Just about everybody knows of lost tools being found during an inspection. I've found more than a few with one I recall with a smile was a cable tension indicator tool for checking the cable tensions on a DC8 elevator control system in this case. This tool had to be checked out and back in from a special tools crib controlled by the parts department. A crew many months previous had checked it out and it had never returned. The person who checked it out had used it to check the tensions and said that he had left it on the up cable for the second person to do the dual inspection. This inspector had used his own tension indicator tool and the first had disappeared or at least was not where they expected to find it. With shift changes in that timeframe, the company thought that the tool had been stolen by a thieving mechanic. Now what would this thief do with a 5/32" cable tension tester is way beyond me but the person who signed it out was held accountable and given a few days holiday without pay for not returning it. Many months

later, I was removing the top panels in the cargo department of that same DC8 and what did I see but a cable tension tool clamped on an elevator cable that had been riding back and forth on that cable since the last inspection. Fortunately, it was not near a cable pulley cluster or they could have had a new elevator stop with likely very serious consequences. From a bucking bar inside of a Cessna flap to a long fluorescent tube light inside a new aircraft fuel tank, in my 60 plus years I've seen all too many tools left behind that certainly shouldn't have been. These forgotten tools can kill.

One minute is a short amount of time that can have huge positive consequences. If you can see the benefit of taking that minute in time please remember now is the time to motivate yourself to start doing it. Right this moment set the goal to take **the minute for Safety**. Use the motivation to remember to "give it a try." It takes time, however only by repeatedly motivating yourself to remember to do it can it become that important habit that enhances Safety. As I've said in the past: Safety is hard -#53 July 2020, but if it becomes a habit it becomes increasingly easier. Some experts say that it takes a minimum of 21 consecutive repetitions for a habit to begin to form. As you never want to pay the price of a mistake, that little effort is worth the extra margin of Safety. As Nike says: Just do it.