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SAFETYWIRE

Excerpt from APSA's "The Safety Wire" – August 2023

In this Edition,

I want to take the time to talk about electronics in the cockpit. Now, we all know its 2023 and we have so many resources readily available to use in the cockpit via Apps on our phones, iPads, and other electronics. Using these assets can be a great advantage to us when used properly, like real time weather, sectional charts, traffic avoidance, and being able to track ground units and having CAD in the aircraft. While these electronics can sometimes be distractions, like texting, phone calls, checking the score of your favorite team, and anything else that's not related to the job or task at hand, I still believe these devices do more good than bad. It is on the pilot and crew to check each other and use these items proficiently and correctly so they do not become distractions, but better help us with situational awareness and completing the mission. With all of the considerations to make while flying with these devices, there has been a recent accident that really made me think about another: how we mount or have these items in the aircraft. I personally fly with mine on a magnet on my kneeboard, but there are many other popular options out there including hard mounts, Velcro, and suction cups. Whatever you decide to go with, you need to consider the risk involved with each. Now this accident that happened was very tragic and the probability seems miniscule but, unfortunately, the reality is things like this do, in fact, happen. The accident I am referring to is the CH-47 that crashed into the Salmon River in Idaho while fighting a wildfire in July, 2022. I have attached the NTSB Examination Summary that was released recently. It should be noted that this isn't the final investigation report, rather findings during this investigation that the NTSB thought were important to get out to raise awareness on this situation.

Here is the following report from the NTSB:

DETAILS OF THE EXAMINATION

During recovery of the accident helicopter, the flight crew's Apple iPad was found in the river near the cockpit. Figure 1 shows the overall damage to the iPad as recovered. There were three distinct gouge marks on the left side of the iPad and its case, when viewed in portrait mode. The iPad exhibited a bend from the back of the case toward the screen. The top two gouges extend from the edge of the case inward into the screen about 3 inches. The bottom gouge is shallower and does not extend into the screen.

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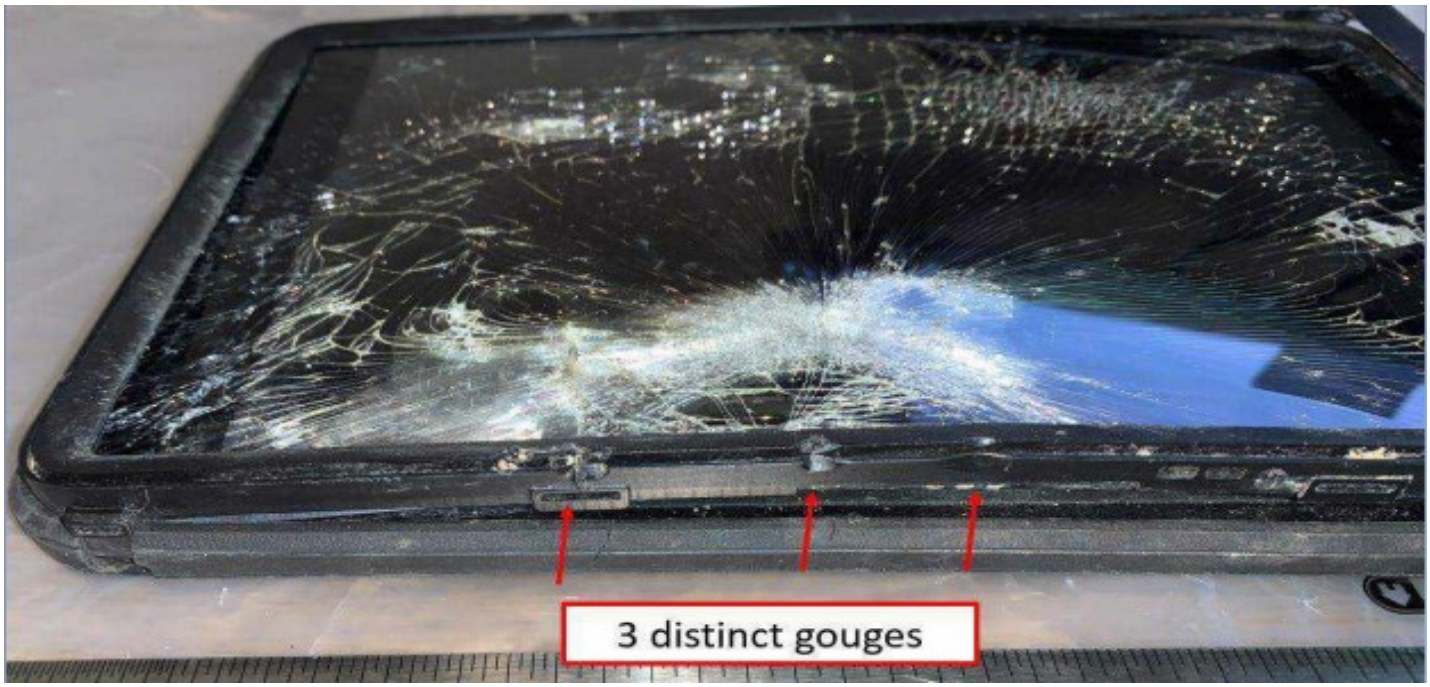

Figure 1. Condition of iPad after the accident with 3 distinct gouges in the iPad and it's case. The gouges are on the left side of the iPad when viewed in portrait mode. In the image, the iPad is rotated left into landscape mode.

To facilitate the examination, the operator provided access to an exemplar Columbia Helicopters CH-47D helicopter whose cockpit was configured similarly to the accident helicopter. The following items were completed:

- Auxiliary power unit turned on.
- Power transfer unit 1 and 2 on to supply hydraulic assisted power.
- Trim release was turned on via the switch on the center console, which unlocked the yaw magnetic brake, resulting in the pedals staying in position once foot pressure was relieved from the pedal.
- On left seat (pilot) controls, left pedal was pushed forward, which resulted in the right seat's (co-pilot) left pedal to also move forward.
- On the co-pilot's side, an iPad was placed between left pedal and airframe, next to the heel slide support assembly.

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Figure 2. Trim release ON and iPad placed in co-pilot's left pedal area.

Once the iPad was placed in the co-pilot's left pedal area, the pilot's pedals were slowly manipulated to determine how the position of the iPad would change. Additional pressure was applied to the pilot's left pedal, which allowed the iPad to fall farther into the left pedal and jam between the heel slide support assembly. The jammed iPad prevented the pedals from recentering. The iPad also pushed against co-pilot's left pedal adjustment lever.

When pressure was applied to the pilot's right pedal, the iPad was squeezed in between the pedal and the heel slide support assembly, which was concentrated near the gouges. The gouges in the iPad aligned with a sharp, vertical metal piece of the heel slide support assembly underneath the heel slide, as seen in Figures 3, 4, and 5. Additional right pedal input forced the iPad to apply more pressure to the co-pilots pedal adjustment lever.

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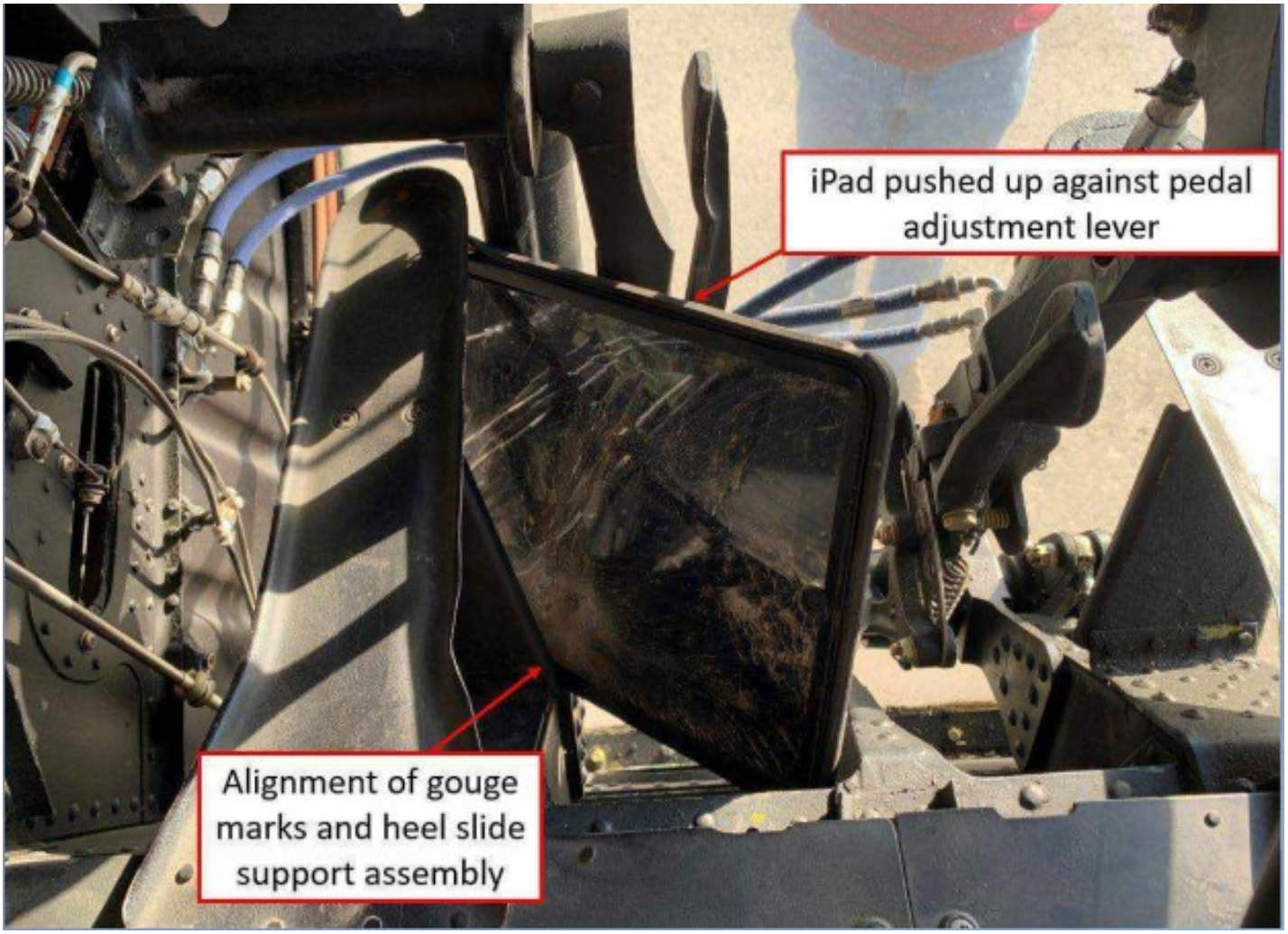

Figure 3. The iPad impinged in between the co-pilot's left pedal and the airframe. The back side of the iPad is pushing against the left pedal adjustment lever. The lower left corner of the iPad is lodged into a small corner of the airframe. The gouges in the iPad aligned with a sharp, vertical metal piece of the heel slide support assembly.

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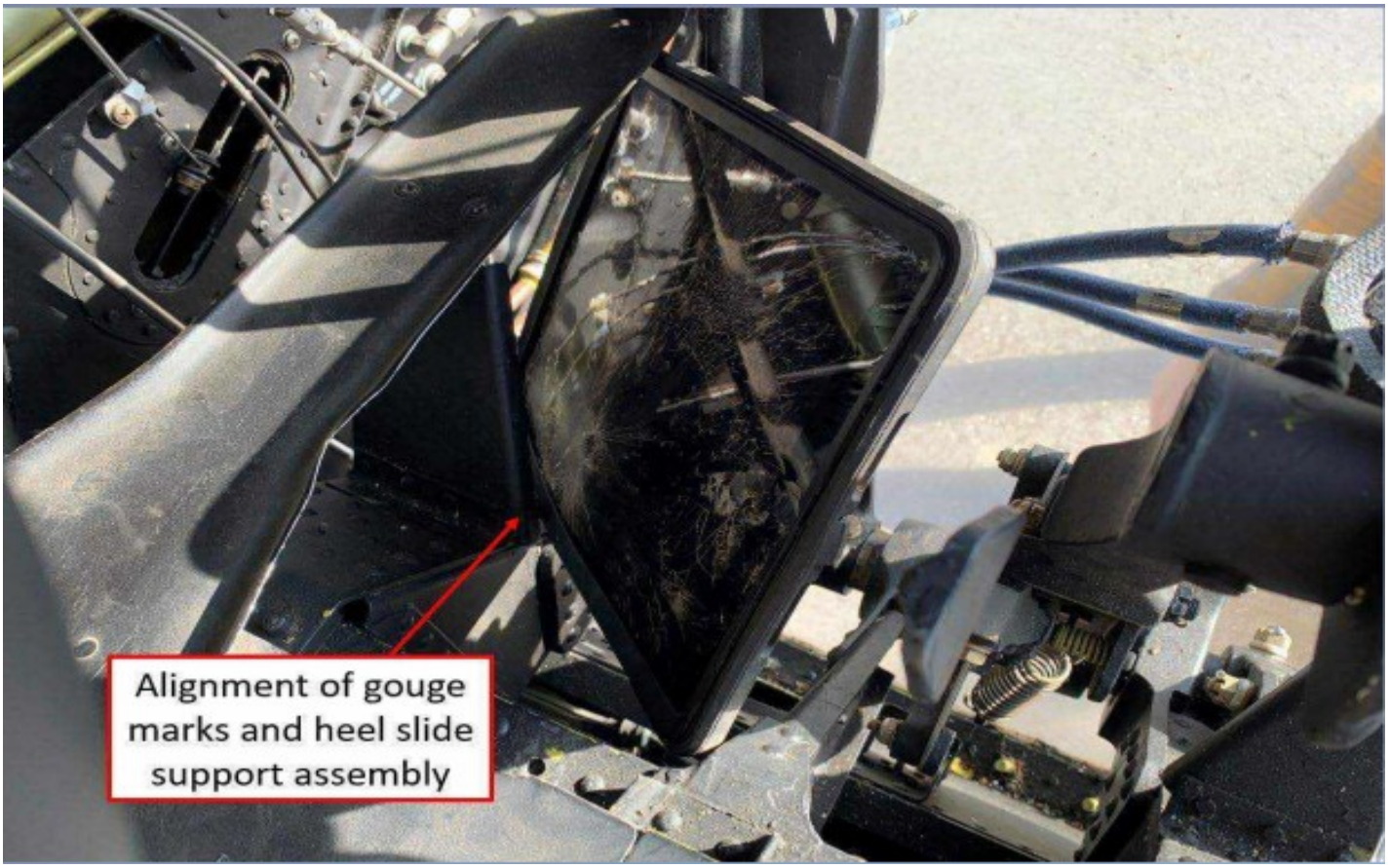

Figure 4. The iPad impinged in between the co-pilot's left pedal and the airframe. The lower left corner of the iPad is lodged into a small corner of the airframe. The gouges in the iPad aligned with a sharp, vertical metal piece of the heel slide support assembly.

Post-accident examination of the accident helicopter, N388RA, revealed that the co- pilot's left pedal was at the forward-most adjustment setting and the co-pilot's right pedal was at the middle adjustment setting.

With the seat restraints on and seats adjusted for comfort, both a 5'7" male and 6'2" male could not reach the iPad in this position. The accident co-pilot's height was 5'10". Additionally, wearing a flight helmet would limit the ability to reach down as the flight helmet would contact the instrument panel visor as seen in Figure 5.

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Figure 5. Exemplar 5'7" male wearing seat restraints is reaching for the iPad. The restraints and instrument panel visor prevent the iPad from being accessible.

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AINSight: FAA Aeromedical Update

Changes mean pilots need to be proactive

(Source: By Robert Sancetta)

While most pilots can simply enter the office of their AME and leave with a new medical certificate in hand, as I have discussed before, some pilots have medical conditions which require documentation to be submitted to the FAA. This somewhat complicates those specific FAA medical issuances, but usually, things work out in favor of the pilot.

And, for many such medical conditions, with a small documentation packet—often just a few pages—the AME can issue that pilot's medical certificate "on the spot" at the time of the FAA examination.

I've also discussed formal special issuance protocols previously, and, while those also require documentation submission to the FAA (sometimes voluminous in nature), most special issuance pilots do indeed get their medical certificates renewed on an appropriate schedule.

To facilitate this procedure, to the FAA's credit, the agency continues to improve protocols and checklists for pilots, their AMEs, and the pilot's "treating physicians." The purpose of all the effort being put into these documents is to enable everyone involved to know precisely what the FAA is expecting to be presented in a pilot's required medical data. This is a valuable improvement to the medical certification process, but it has added some complexity and hardships, too.

For conditions wherein the FAA has developed written protocols and procedures, pilots who receive letters from the FAA asking for follow-up documentation—either to be provided rather timely or simply for their next medical certificate issuance—will have these requirements spelled out. If they are routine and uncomplicated in nature, the requirements may simply be detailed in the verbiage of the FAA letter itself. In more complicated cases, the FAA will provide additional "specifications pages" that might, at first glance, appear lengthy, unwieldy, and overkill.

In fact, many treating physicians feel that these newer specifications pages are overbearing.

As an example: a pilot who might have been "stable" in their medical condition for many years, whose attending physician has provided numerous detailed periodic "status reports" on this medical condition, and who has been approved and reapproved by the FAA for a considerable period of time. But for the treating physician to now be given a new set of documents basically stating that what they have previously been providing will no longer suffice and possibly entail performing additional testing that the treating physician finds not medically necessary does not lead to much goodwill between the pilot, physician, AME, and the FAA.

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While most FAA protocols are reasonable and well explained, for those that now appear to be lengthier, more involved, and indeed at times overkill, I do occasionally receive communications from treating physicians stating that the new requirements are…well, let's just say that their comments are not suitable for this publication.

But you get the idea. I have had the unfortunate experience of having physicians simply refuse to see pilots, as they find the FAA requirements for documentation to be too burdensome to be worth their while.

However, if a pilot is to receive their medical certificate or special issuance renewal, we all must abide by any new and/or revised protocols issued by the FAA. As I have stated in prior blogs, these protocols are not optional. They are the pilot's equivalent of their personal FAA medical "ops specs" and are therefore regulatory in nature.

I am currently in the process of discussing with the FAA why previously acceptable evaluations that have sufficed for certain pilots are no longer good enough. An example I am thinking about is a pilot who has been entirely stable without any recurrence of the medical condition in question for well over 30 years.

This pilot must now obtain a lengthier evaluation and additional testing, even though their treating physician of 30+ years does not find that such testing is medically indicated. The testing can indeed get done, eventually, but it might take months for the pilot to get yet another appointment with the attending physician to order the test, review the results, and write yet a new letter discussing the additional required testing.

If the FAA letter including the specifications pages is received by the pilots well in advance, then it's not too difficult to coordinate any additional testing. However, when medical data, submitted to the FAA nearly a year prior, finally is followed by a new FAA letter requiring additional testing, the FAA letter being received long after the pilot has already seen their treating physician for their next annual evaluation, that becomes frustrating—for all of us.

If we comply, begrudgingly at times, the pilot is likely to continue their flying career. As frustrating and "doom and gloom" as I am making this sound, an important take-home point is that we still get almost every pilot approved—more than 99.9 percent of those who apply.

The FAA does want to approve every pilot it possibly can—I am being quite serious about this—but it is not always an easy or uncomplicated process.

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Note to pilots: the AME does not always receive a copy of the "enclosed specifications" that are referred to in a pilot's FAA letter. I remind all pilots to immediately forward a copy of the specifications pages to their treating physician, and to communicate with their AME whether the AME's copy of the FAA letter did, or did not, include the specifications pages referred to in the body of the letter itself.

Helpful Hints:

Please provide all pages of any documentation submitted. A pilot might think they are being helpful when, for example, pages six to 10 (of perhaps 20 or more) discuss the medical condition in question. While that sounds reasonable, the FAA won't buy it, and usually the AME won't, either. Usually, indeed, the remainder of the documentation consists of boilerplate notes and aftercare instructions to the patient.

There are times, however, when the pilot is actually trying to avoid having the AME and/or the FAA discover that some other medical condition of note is also under consideration. Am I implying that, at times, a pilot might be untruthful to their AME or the FAA? Fortunately, that's not you.

Kidding aside, include all pages. If there are 21 pages, include all 21. Let the AME and the FAA decide which pages are relevant or not.

It is also not good enough for the treating physician to state something like, "The MRI was normal." All documentation must include the full report of any testing either required by the FAA letter or—and here's a catchphrase for you)—"deemed necessary" by the treating physician.

So, if an MRI wasn't even required but was done at the discretion of the physician, the full report must be included. Or, if the physician decided it was time to do some elective blood testing to be legally faithful to the FAA letter, the results of that testing must also be included.

When a pilot discusses their case with an airline or corporate aviation medical consultant who is not necessarily the pilot's AME, often the consultant will tell the pilot, perhaps after their review of only a few pages of documentation, "All is fine, just report it at your next FAA examination." Often a pilot is told that they don't even need to bring any documentation to the AME. While that is sometimes the case, it doesn't always work.

It's the AME's name, not the aviation medicine consultant's name, on the bottom of the medical certificate. The AME might say, as discussed above, that the FAA requires them to review all the appropriate data before issuing the medical certificate.

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A pilot should discuss with their AME, as soon as possible after the medical event or routine follow-up, what is going on so that the AME is not blindsided at the time of the next FAA examination. A bit of a heads-up in advance will give the AME time to coordinate with the pilot precisely what, if any, documentation will be needed.

Right now I have a few pilots grounded for medical conditions that, had they given me a heads-up several months before their FAA examination, I could have had everything “tucked in” to the FAA’s satisfaction by the time of their scheduled examinations with me. Finding out about potential aero-medical concerning conditions only when they arrived for their examinations did nothing but preclude these pilots from flying until I can get all the needed documentation and sort things out.

I lost the luxury of time by not knowing about these medical situations in advance. Importantly, when I know in advance that a more detailed review or discussion with the pilot will be necessary, my office can schedule the appropriate additional time to do so.

No different than the captain of the airplane, the AME is captain of the FAA medical aspects of that pilot’s medical renewal and must be familiar with all required components. The AME’s signing of the medical certificate places similar responsibility as the captain of the airplane signing the dispatch release. It’s the captain’s authority now, and no captain wants to be at the end of a long table with an adversarial set of FAA and legal eyes looking at them, knowing that they did not comply with all rules and protocols.

No different than when flying, make sure to have all of your ducks in the proverbial row as expeditiously as possible regarding your medical status. AMEs are in the same boat and are held by the FAA to similar standards. Please get your AME “into the loop” as soon as possible when any new medical conditions have arisen.

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SAFETY MANAGER'S CORNER

SMS Training Course

Twice a year, PRISM offers a 3-day SMS Course at a location near its home offices in Denver, Colorado. The next course is scheduled for this month, September 26-28, 2023. PRISM subscribers receive a discounted price. You can sign up directly on this link: https://www.argus.aero/product/sms-course-september-26-28-2023

Who Should Attend?

This training course is targeted for personnel at all levels involved in the day to day development, implementation, execution, management, oversight and evaluation of a Safety Management System operation.

Course Objectives

⇒ Describe the 4 Components and the 12 Elements of the ICAO SMS Framework

⇒ Become familiar with characteristics of an effective and "just" safety culture and learn techniques for how to evaluate your organization's safety culture

⇒ Use and apply the Safety Risk Management process

⇒ Describe what Change Management is concerned with according to SMS

⇒ Become familiar with Safety Performance Indicators (SPI) and how they relate to the three strategies of SMS

⇒ Describe how to implement an Internal Auditing Program (IAP) in your organization and where to find appropriate checklists.

⇒ Become familiar with a phased approach to SMS implementation

⇒ Use and apply several Root Cause Analysis Techniques in safety investigations

The PRISM, online SMS tool will be used as a case study for the application of Safety Management System best practices during the course.

Take advantage of this opportunity to meet with our PRISM experts face-to-face, and learn everything you need to know for Safety Management System (SMS) success.

Alternatively, we can bring an SMS Course to you—onsite at your location for up to 20 people. For details and pricing, please contact us at 303-222-4268 or email: susan.cadwallader@prism.aero

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Quote of the Month

The most difficult thing is the decision to act, the rest is merely tenacity. The fears are paper tigers. You can do anything you decide to do. You can act to change and control your life; and the procedure, the process is its own reward.

-Amelia Earhart

Self-improvement results in positive impact in so many different ways. Although the individual is the immediate beneficiary, a trickle effect creates indirect improvement in surrounding interactions. We have all heard impact stories: “Someone paid for my coffee at the drive through and It made my day!” If something as small as a coffee can have that level of impact, just imagine the power of positive meaningful actions in a work environment. It all starts with self. Go after your own rewards and those around you will share the benefits.

On Short Final...

It’s a hybrid.

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