



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.

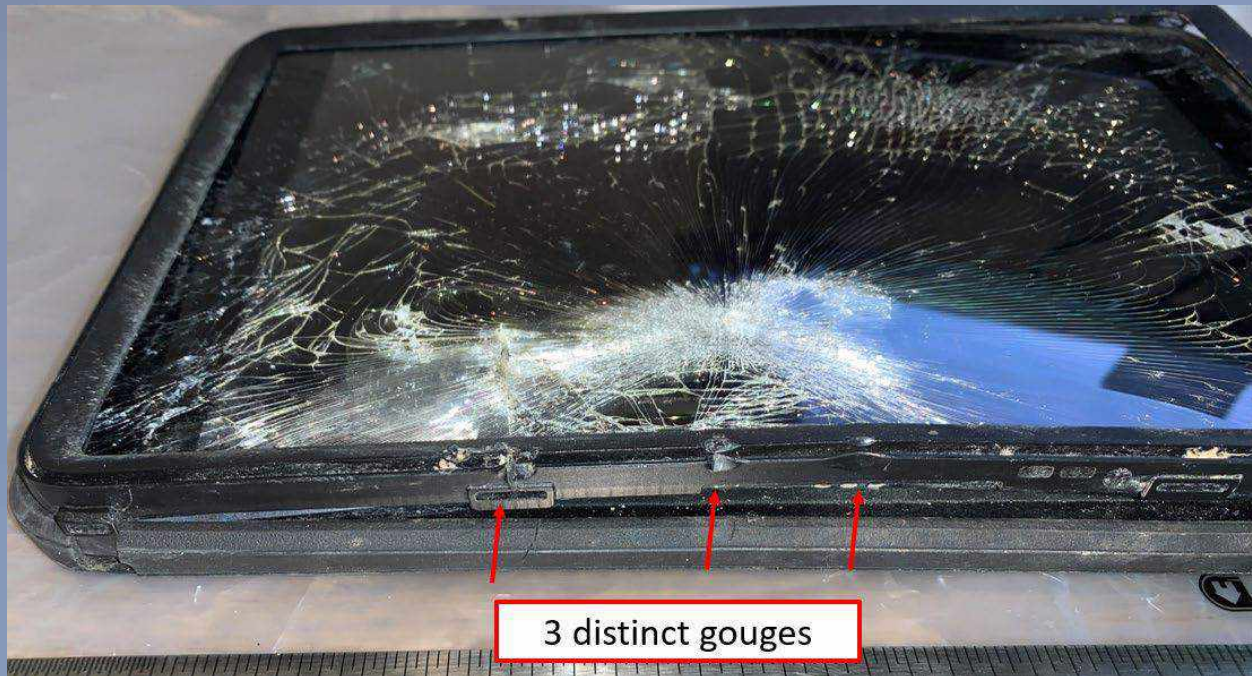


Figure 1. Condition of iPad after the accident with 3 distinct gouges in the iPad and it's case. The gouges are on the left side of the iPad when viewed in portrait mode. In the image, the iPad is rotated left into landscape mode.

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:

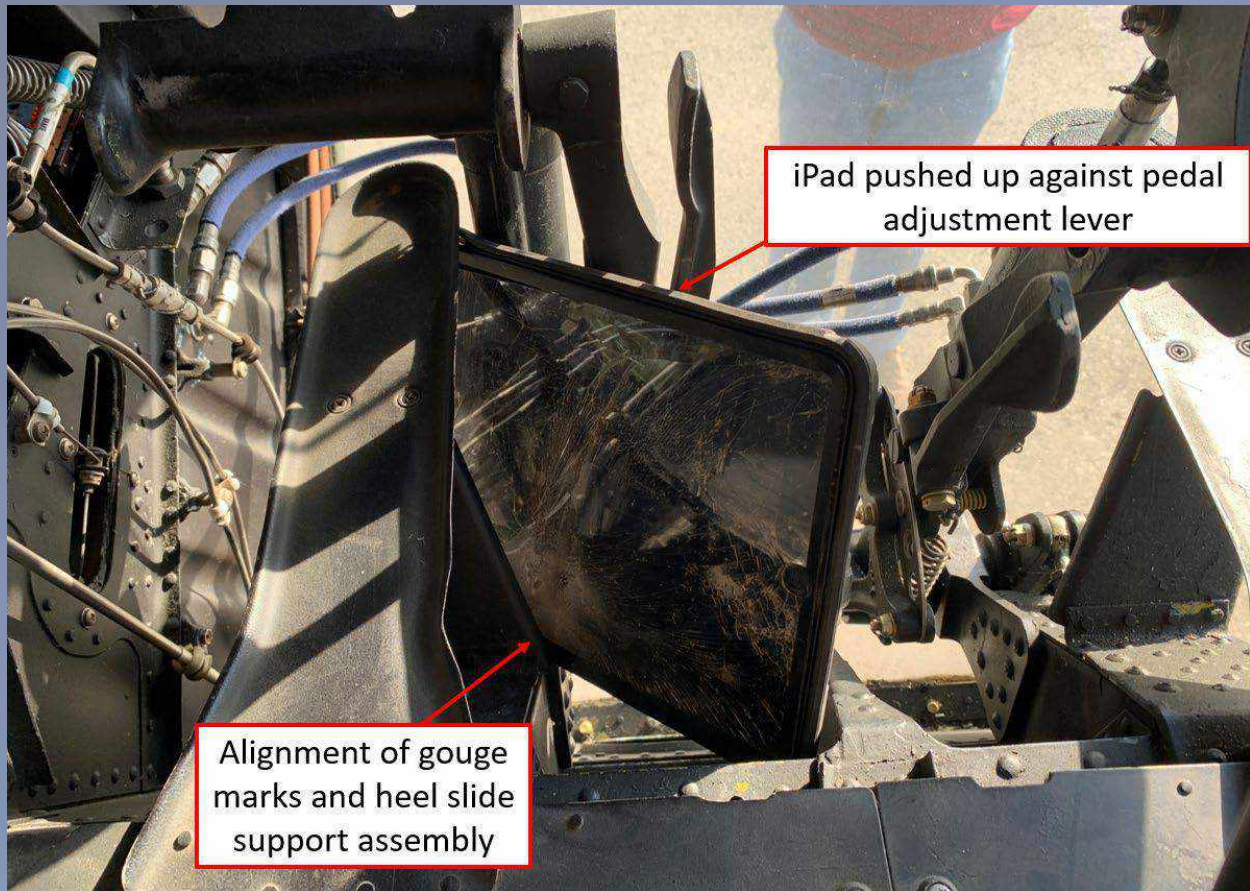
- Auxiliary power unit turned on.
- Power transfer unit 1 and 2 on to supply hydraulic assisted power.
- Trim release was turned on via the switch on the center console, which unlocked the yaw magnetic brake, resulting in the pedals staying in position once foot pressure was relieved from the pedal.
- 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.



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.



iPad pushed up against pedal adjustment lever

Alignment of gouge marks and heel slide support assembly

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.



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.

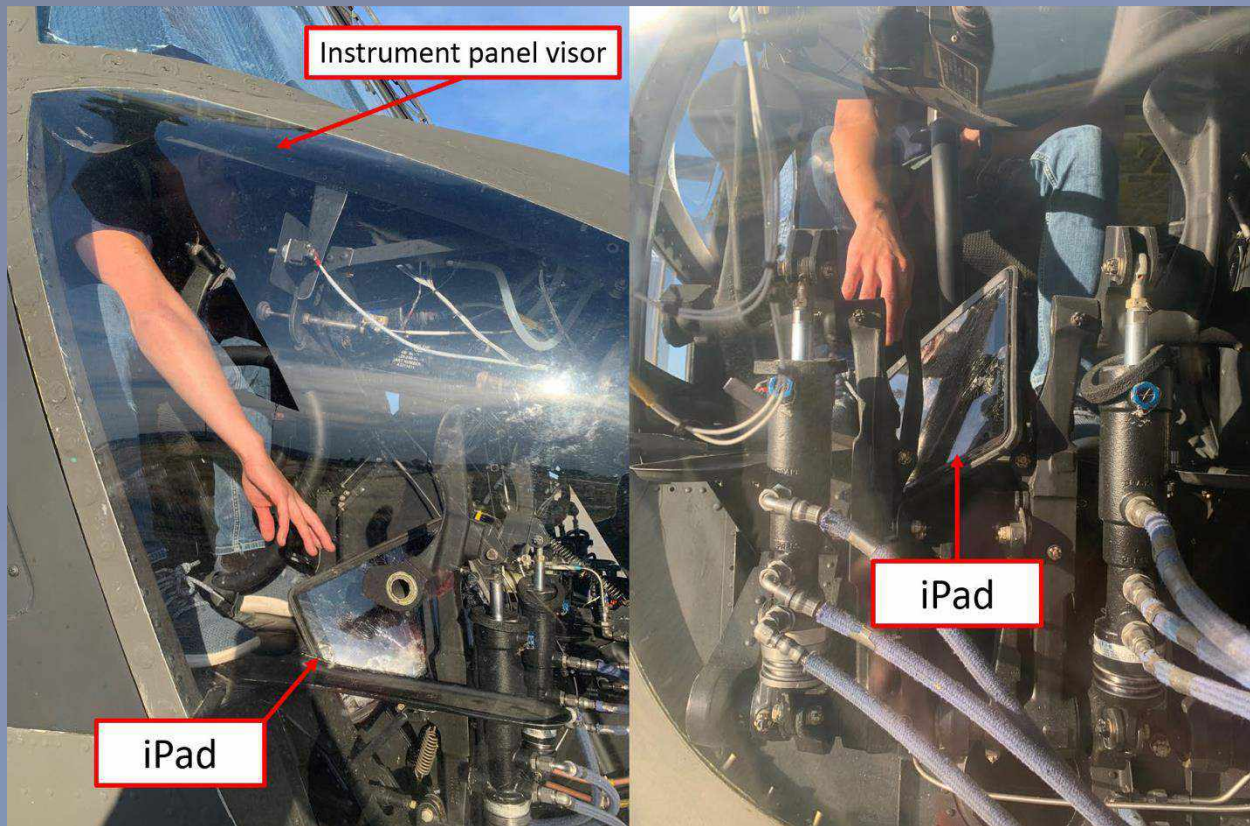


Figure 5. Exemplar 5'7" male wearing seat restraints is reaching for the iPad. The restraints and instrument panel visor prevent the iPad from being accessible.

ONLINE MEETINGS

APSA conducts regularly scheduled online meetings for safety officers, maintenance technicians, SAR and Natural Resources personnel, and UAS operators via a conference call you can join using your computer, mobile device or phone. Online meetings are open to any APSA member. Contract maintenance providers to APSA members are welcome to participate in the maintenance meeting as well. If you would like to join, send an email to: tpalmer@publicsafetyaviation.org

The schedule for upcoming APSA online meetings is as follows:



SAR:

Wednesday, August 9, 2023
1:00 PM - 2:00 PM EDT (1700 UTC)

Maintenance:

Wednesday, August 23, 2023
1:00 PM - 2:00 PM EDT (1700 UTC)

UAS: Wednesday, September 6,
2023

1:00 PM - 2:00 PM EDT (1700 UTC)

Safety Officers:

Friday, September 22, 2023
1:00 PM - 2:00 PM EDT (1700 UTC)

Natural Resources:

Wednesday, October 4, 2023
1:00 PM - 2:00 PM EDT (1700 UTC)

"No man will make a great leader who wants to do it all himself or get all the credit for doing it"

~ Andrew Carnegie

EMERGENCY PROCEDURE OF THE MONTH

In each monthly emergency situation, discuss what you would do, as a crew, to respond to the following emergency. If the EP does not apply to your specific aircraft, think of something similar.

Stuck Pedal