

National Transportation Safety Board

Office of Research and Engineering

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PERSONAL ELECTRONIC DEVICES

Specialist's Factual Report

July 3, 2024

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A. EVENT SUMMARY

Location: Williams, Arizona
Date: October 17, 2023
Time: 12:19 p.m. mountain standard time (MST)
Airplane: Piper PA-28-140, N6192J

B. PERSONAL ELECTRONIC DEVICES SPECIALIST

Specialist: W. Deven Chen
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National Transportation Safety Board (NTSB)

C. DETAILS OF THE INVESTIGATION

A recorder group was not convened. The NTSB Vehicle Recorder Division received the following personal electronic devices (PEDs):

Recorder Manufacturer/Model:	Apple iPhone 11
IMEI Number:	352910118108939
User:	Left-Seat Pilot
Recorder Manufacturer/Model:	Apple iPhone 14 Pro
IMEI Number:	350923384810890
User:	Left-Seat Pilot
Recorder Manufacturer/Model:	Apple iPhone 13 Pro Max
IMEI Number:	352114950942667
User:	Right-Seat Copilot
Recorder Manufacturer/Model:	Apple iPhone 11 Pro Max
IMEI Number:	353891106369726
User:	Rear-Seat Passenger

1.0 Recorders Description

PEDs are a category of devices comprised primarily of portable computing devices and mobile phones. Portable computing devices are typically capable of internet access, email, messaging services, and can run user-installed applications to perform specific tasks. Depending on the model, mobile phones can perform many of the same tasks as portable computing devices, plus have voice call and text messaging capabilities. PED user and system data is typically stored on non-volatile memory (NVM)¹ and can be accessed through manufacturer-provided interfaces.

¹ NVM is semiconductor memory that does not require external power for data retention.

1.1 Recorders Condition

Figures 1 to 4 show the condition of the four PEDs received by the Vehicle Recorder Division. All PEDs except the Apple iPhone 11 powered on normally after being cleaned externally. The motherboard of the Apple iPhone 11 was removed from the device and placed into a surrogate device, and the device powered on. All four PEDs were unlocked with provided passcodes.



Figure 1. Front and back of the Apple iPhone 11 as Received.



Figure 2. Front and back of the Apple iPhone 14 Pro as Received.



Figure 3. Front and back of the Apple iPhone 13 Pro Max as Received.



Figure 4. Front and back of the Apple iPhone 11 Pro Max as Received.

1.2 Recording Description

Data stored on all four PEDs were reviewed within NTSB Vehicle Recorder laboratory. None of the four PEDs had image or video recordings associated with the accident flight. Below three sections summarize pertinent data recorded on each of the three people's device.

1.2.1 Rear-Seat Passenger's Phone

There were not any photo/video recordings associated with the accident flight on the passenger's phone. There were some text message exchanges between the passenger and the right-seat copilot on October 16, 2023, discussing a plan that the passenger would take rides with copilot and the pilot on the airplane the next day. No other data pertinent to the investigation were found.

1.2.2 Right-Seat Copilot's Phone

There were no photos/videos recorded on October 17, 2023, on the copilot's phone. There were some video recordings associated with previous flights on October 16, 2023. Those video recordings were similar to the videos found on the left-seat pilot's phones. Those videos are discussed in detail in the next section. Portions of the videos showed that the right-seat copilot and the left-seat pilot were using tablets which was running ForeFlight². The Vehicle Recorder Division did not receive those tablets.

ForeFlight was running in the background of the copilot's phone, but it did not have the accident flight track log recorded. The last track log recorded was a flight associated with a different aircraft on October 14, 2023. There was a flight plan entered in ForeFlight for previous flights on October 16, 2023. Figure 5 shows the details of this flight plan. No other data pertinent to the investigation were found.

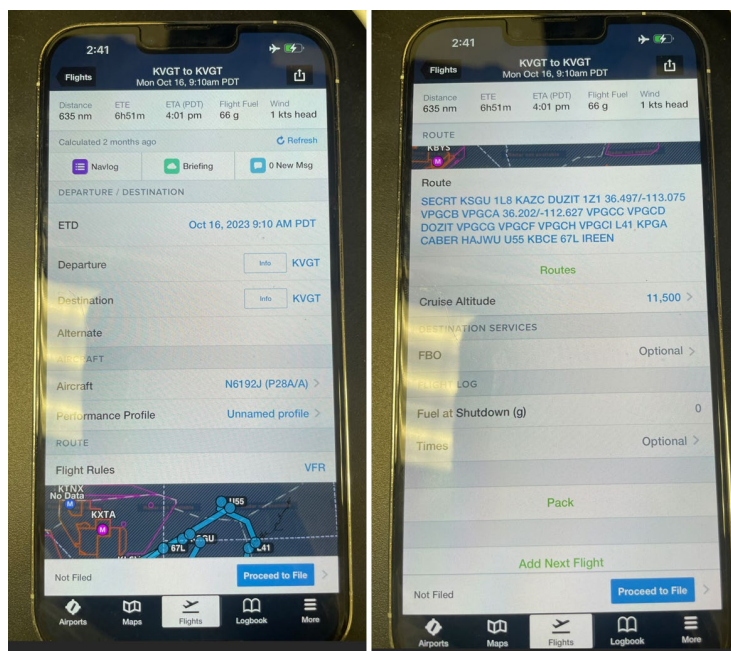


Figure 5. ForeFlight flight plan for previous flights on October 16, 2023.

² ForeFlight - Integrated flight App for pilots to plan, brief and file flight plans; it also has limited flight data logging capability.

1.2.3 Left-Seat Pilot's Phones

Two of the PEDs belonged to the left-seat pilot, and none of them contained photo/video recordings associated with the accident flight. One of the phones was mounted on the cockpit panel of the accident aircraft and recorded forward-facing videos during flights. The videos recorded on this phone contained cockpit intercom system audio. The last video stored was recorded at 11:43 a.m. MST on October 17, 2023. This video contained the landing portion of the flight before the accident flight.

The other phone of the left-seat pilot had ForeFlight installed, but ForeFlight was not running in the background, and the ForeFlight account was found to be expired in 2020. This phone contained many videos that were identical to the videos recorded on the pilot's the other phone, likely due to a cloud-type synchronization of the two phones.

The data from the left-seat pilot's two phones indicated that (all times are in MST):

- The left-seat pilot and the right-seat copilot booked a parking space for the accident aircraft at North Las Vegas Airport (KLAS), Las Vegas, Nevada from 9:00 p.m. on October 15, 2023, to 11:00 p.m. on October 18, 2023, prior to their trip.
- The two pilots obtained the accident aircraft in the evening of October 15, 2023, and flew the aircraft from Brown Field Municipal Airport (KSDM), San Diego, California to KLAS in one leg, from around 6:20 p.m. to around 9:20 p.m.
- The two pilots flew the aircraft on October 16, from around 10:00 a.m. to around 8:00 p.m. with intermittent stops.
- On October 17, a passenger joined the pilot and copilot, and they started their first flight around 9:30 a.m. and landed around 11:50 a.m. at H.A. Clark Memorial Field Airport (KCMR), Williams, Arizona for fuel. The accident occurred shortly after the takeoff from KCMR.

All the photos and videos recorded on October 16, 2023, on the pilot's two phones were reviewed. Below are summaries of those photos and videos which were considered pertinent to this investigation. The summary is presented in chronological order. Each summary starts with each file's name, followed by its recorded date and time, photo/video, length in mm:ss (minutes:seconds), with/without intercom audio, and a descriptive summary of the file.

IMG_4645.MOV (October 16, 10:01 a.m., video, 03:08 in length, with intercom) -

The aircraft was departing North Las Vegas Airport (KLAS), Las Vegas, Nevada.

The aircraft departed. There was nothing remarkable.

IMG_4647.MOV (October 16, 12:06 p.m., video, 08:05 in length, with intercom) -

The aircraft was landing at St. George Regional Airport (KSGU), St. George, Utah. The left-seat pilot remarked on the landing position of a heavier aircraft ahead of them. One of the pilots remarked that he should land prior to the touchdown point of the heavier aircraft (under its approach). The other pilot corrected him stating that he should land after the touchdown point of the heavier aircraft. The video ended before the aircraft touched down.

IMG_4648.MOV (October 16, 12:14 p.m., video, 06:32 in length, with intercom) -

This video is a continuation of IMG_4647.MOV. The aircraft was at KSGU. The left-seat pilot was remarking wanting to exit taxiway A2, but landed past the touchdown markings and was unable to make a turnoff at taxiway A2. The left-seat pilot approached taxiway A4 at a high rate of speed and nearly lost control of the aircraft exiting the runway at A4. When they exited at A4, they realized Taxiway A was closed between A2 and A4. The two pilots expressed confusion on how to get to the self-fuel (located on the other side of the airport) if the taxiway was closed, and further remarked if they would have to take off again to make another attempt so they could instead exit A2. They then realized that they could back-taxi on runway 19 to A2. They then back-taxed runway 19 to A2. The rest of the video was unremarkable.

IMG_4650.MOV (October 16, 01:02 p.m., video, 06:39 in length, with intercom) -

At Hurricane Municipal Airport (K1L8), Hurricane, Utah, the right-seat copilot informed the left-seat pilot to be 80 to 75 mph (miles per hour) on final. The pilot questioned "knots or mph", and the copilot replied "knots". The pilot then said, "oh see I was going knots, I'm so used to knots, I'm used to the knots, so you want 80 mph", and the copilot replied "yes". The pilot said rotate at 55 mph, and was corrected to 60 mph. The pilot then commented that he would climb at Vy over some power lines and then was corrected to climb at Vx by the copilot.

IMG_4651.MOV (October 16, 02:11 p.m., video, 10:12 in length, with intercom) -

The aircraft was landing at Marble Canyon Airport (KL41), Marble Canyon, Arizona. The pilots overflowed the field and turned left to enter the downwind at least 400 feet above traffic pattern altitude (according to radio calls), then executed a steep descent and rounded off base with almost no final approach. When the right-seat pilot commented it was tight and questioned "you gonna make that", the left-seat pilot responded, "I'm [expletive] [his own name], I can do everything". The aircraft touched down at least halfway down the runway.

IMG_4652.MOV (October 16, 02:48 p.m., video, 07:57 in length, with intercom) -

The pilots were departing KL41. They commented that there was no wind. The pilots elected to back taxi and departed on runway 03. They remarked that

runway 03 was uphill, and later had trouble turning the aircraft around when they completed back taxi (runway 03 is 35 feet wide). The left-seat pilot remarked that he used 2 notches of flaps and performed a short field takeoff. When the left-seat pilot brought up the last notch of flaps the stall horn beeped. The pilots performed left closed traffic and returned to a touch-and-go at runway 03. The pilots appeared to fly a normal pattern and approach at this time. The aircraft touched down normally.

IMG_4653.MOV (October 16, 03:14 p.m., video, 05:27 in length, with intercom) -

When landing a runway at Page Municipal Airport (KPGA), Page, Arizona, the pilots significantly overshot final centerline and corrected. The landing was uneventful.

IMG_4655.MOV (October 16, 06:03 p.m., video, 07:58 in length, with intercom) -

The aircraft flew a tight pattern to a landing on the runway 18 at Panguitch Municipal Airport (KU55), Panguitch, Utah. The right-seat copilot commented the pattern was tight and asked the left-seat pilot if he was going to slip. The aircraft performed a rounded base to final with a slip, in which the aircraft overshot the center line, and corrected back sharply at low altitude to perform a touch-and-go. The right-seat copilot commented "good landing". The airplane then performed a takeoff, in which they built airspeed in ground effect and then pulled up sharply. The pilot commented that "the plane had little hard time climbing" due to local high altitude.

IMG_4656.MOV (October 16, 06:21 p.m., video, 09:11 in length, with intercom) -

The aircraft performed a touch-and-go at Bryce Canyon Airport (KBCE), Bryce Canyon, Utah. Upon takeoff, one of the pilots remarked they were "barely climbing" and made a comment that he was reducing the flap setting. When the left-seat pilot reduced the flap setting, the stall horn activated. The left-seat pilot remarked he used two notches of flaps. The left-seat pilot then stated, "this one doesn't have much affect at ten, you need always twenty." The left-seat pilot made a right turnout, the right-seat copilot stated, "keep climbing". The left-seat pilot then said, "I want to climb this guy's not climbing." When in the climbing right turn the stall horn activated and then turned off. The video ended shortly thereafter.

IMG_8615.MOV (October 16, 06:27 p.m., video, 00:28 in length, without intercom) -

The left-seat pilot stuck a phone out of the left side small vent window of the accident aircraft. It appeared the right-seat copilot was flying at this time.

IMG_8650.MOV (October 17, 09:06 a.m., video, 00:08 in length, without intercom) -

At North Las Vegas Airport (KLAS), Las Vegas, Nevada, the two pilots were pre-flighting. The passenger was seen standing next to the aircraft.

IMG_8651.JPG (October 17, 09:20 a.m., photo) -

A photo of a fuel receipt from North Las Vegas Airport showing 22.39 gallons of 100 LL fuel added to the accident aircraft (N6192J).

IMG_4658.MOV (October 17, 10:38 a.m., video, 00:21 in length, with intercom) -

The aircraft was in the air, and they were in the vicinity of Grand Canyon Airport (KGCN).

IMG_8658.MOV (October 17, 10:41 a.m., video, 00:08 in length, without intercom) -

A short video showing the right-seat copilot and the passenger taken in flight. The passenger was sitting on the back right seat. It was the first time there was a passenger seen riding with the pilot and copilot in the accident aircraft since October 15, 2023.

IMG_4659.MOV (October 17, 11:43 a.m., video, 04:35 in length, without intercom) -

The aircraft on approach to landing at H.A. Clark Memorial Field Airport (KCMR), Williams, Arizona. The aircraft landed long. The pilots were heard remarking "20 gallons" when they pulled up to the self-serve fuel pump.

IMG_8661.JPG (October 17, 12:00 p.m., photo) -

A photo of a fuel receipt from H.A. Clark Memorial Field Airport showing 19.75 gallons of 100 LL fuel added to the accident aircraft.

Throughout any of the videos above, there was no discussion between the two pilots regarding takeoff roll, weight and balance or density altitude.

Submitted by:

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