

# National Transportation Safety Board

Office of Research and Engineering

Washington, DC 20594



WPR20CA298

## **ONBOARD IMAGE RECORDER**

Specialist's Factual Report

August 7, 2024

## **A. ACCIDENT SUMMARY**

Location: Whitmore, AZ  
Date: September 7, 2020  
Time: 13:00 local time  
Airplane: Cessna 208, N186GC  
Operator: Grand Canyon Airlines

## **B. ONBOARD VIDEO RECORDER SPECIALIST:**

Specialist: Sean Payne  
Branch Chief - Vehicle Recorder Division  
National Transportation Safety Board (NTSB)

## **C. DETAILS OF THE INVESTIGATION**

The NTSB Vehicle Recorder Division received the following file:

Filename: Bar 10 Flat tire after landing.MOV

In agreement with the Investigator-In-Charge (IIC), a video group was not conducted, and a summary report was prepared.

### **1.0 Device 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) and can be accessed through manufacturer-provided interfaces.<sup>1</sup>

### **1.1 Time Correlation**

A time correlation was not conducted. Instead, the summary below appears in video elapsed time in the format MM:SS, where MM stands for the number of elapsed minutes, and SS, the number of elapsed seconds.

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<sup>1</sup> Non-volatile memory is semiconductor memory that does not require external power for data retention.

## 1.2 Video Summary

The video was recorded using a handheld PED, in a vertical video format. The resolution was 1920x 1080 pixels and the frame rate was 29.97 frames per second.

The author of the video appeared to be seated just behind the right front seat and appeared to be holding the camera in such a way that the field of view captured a view from the front right seat (arm extended forward of their position).

The video began with a view of the right wing. Engine and propeller noise were audible and were at steady state.

By 00:06, the video had panned forward out of the front windscreen. The Grand Canyon Bar Canyon Airstrip (1Z1), Whitmore, AZ, was visible. The right-side EFIS display, which was behaving as a PFD (henceforth referred to as 'PFD'), indicated the airspeed was 105 knots and the altitude was approximately 4350 feet indicated (baro set).

The video remained forward through the windscreen. The approach continued, the aircraft was stable in pitch and roll, and airspeed remained around 105 knots. Only the PFD and part of the yoke were visible. The flap selection was not visible.

At 00:44, the windsock was visible. The windsock appeared dead.

At 00:48, the airspeed tape was last visible. The airspeed was 87 knots indicated, similar to as it was as the aircraft approached the runway. The aircraft was passing over a dirt-prepared portion just prior to the threshold of the paved portion of the runway.

At 00:50, the aircraft crossed the threshold of the runway.

A sound consistent with a tire touching the runway was audible at 00:52. The pitch and roll attitude at touchdown suggested the right wheel may have touched first. The stall horn chirped around this time.

Within the next second, all sounds similar to pavement and tire noise ceased.

By 00:54, another sound consistent with a tire touching the runway began, a low rumble and flopping noise was audible and continued.

By 00:56, the aircraft's pitch attitude and the addition of another low-frequency noise suggested the nose wheel touched down.

By 01:00, the aircraft's trajectory became noticeably left, and the aircraft was no longer aligned with the runway.

The right side yoke position was changing but was mostly aft. The yoke also showed a right roll input as the aircraft's trajectory continued to head to the left of the runway.

By 01:03, sounds similar to at least one wheel departing the paved surface were detected.

By 01:04, the view out of the front of the aircraft suggested the nose wheel had departed the paved surface.

The camera view became jostled as the aircraft continued to depart the paved surface.

At 01:07, the aircraft passed another windsock. The windsock appeared dead.

Around 01:08, small to medium-sized rocks were visible ahead of the nose and the camera's view jostled wildly. Input from the yoke appeared largely aft.

By 01:11, the author of the video could no longer maintain the desired field of view whatsoever. The aircraft jostled wildly.

The aircraft came to a stop around 01:15. Someone remarked "alright" and another voice "do we get out?" The ELT control panel indicated the ELT had triggered. An electronic chime repeated (not of ELT nature). The pilot was visible, but the engine controls were not visible. Someone remarked "what happened" and someone else remarked, "you alright?" Then someone remarked, "we landed. we're here." A brief view of the cabin was captured. The camera panned around. The engine noise was reduced credibly.

By 01:45, engine noise ceased altogether. Some voices commented on removing seatbelts. A voice then stated, "everyone okay?" Some 'yups' and 'yeahs' were audible. Passengers commented on collecting belongings. The video ended around 02:22.