

NATIONAL TRANSPORTATION SAFETY BOARD

Vehicle Recorder Division

Washington, D.C. 20594

December 18, 2020

Personal Electronic Devices

Specialist's Factual Report

By W. Deven Chen

1. EVENT SUMMARY

Location: Emmett, Idaho
Date: September 22, 2020
Aircraft: Air Tractor AT-802A
Registration: N836MM
Operator: Aero Seat Inc
NTSB Number: WPR2OLA315

On September 22, 2020, about 1845 mountain daylight time, an Air Tractor AT-802A, N836MM, was substantially damaged when it was involved in an accident near Emmett, Idaho. The pilot was fatally injured. The airplane was operated as a Title 14 *Code of Federal Regulations* Part 91 aerial firefighting flight.

2. PERSONAL ELECTRONIC DEVICES GROUP

A personal electronic devices group was not convened.

3. DETAILS OF INVESTIGATION

The National Transportation Safety Board (NTSB) Vehicle Recorder Division received, on October 9, 2020, the following personal electronic devices:

Device 1 Manufacturer/Model: **Apple iPad Mini 4**
Serial Number: **F9FTR02EGHVN**

Device 2 Manufacturer/Model: **Apple iPad Mini 5**
Serial Number: **F6QD601ALMVJ**

3.1. Device Description

PEDs (personal electronic devices) 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. PEDs user and system data are typically stored on non-volatile memory¹ (NVM) and can be accessed through manufacturer-provided interfaces.

3.2. Data Recovery

3.2.1. Apple iPad Mini 4

Upon arrival at the Vehicle Recorder Division, an exterior examination revealed the device was undamaged, as shown in Figure 1, and powered up normally. The contents were reviewed for data related to the accident. The device was installed with ForeFlight² whose contents were reviewed. The last track was recorded on June 2, 2020, from 3CO2 to U76. No photos related to the accident present on the device. Thus, no accident related data were recovered from the device.



Figure 1: Front and back of the Apple iPad Mini 4 as received.

3.2.2. Apple iPad Mini 5

Upon arrival at the Vehicle Recorder Division, an exterior examination revealed the device was severely damaged, as shown in Figure 2. The motherboard was removed from the device and installed in a lab surrogate; however, it did not power up normally. The extent of the damage precluded normal and advanced recovery procedures and additional attempts were unsuccessful in yielding usable data. In an agreement with the investigator-in-charge,

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

² ForeFlight is an electronic charting and navigation program for pilots.

no further recovery procedures were attempted. Therefore, no data pertinent to the accident were recovered from the device.

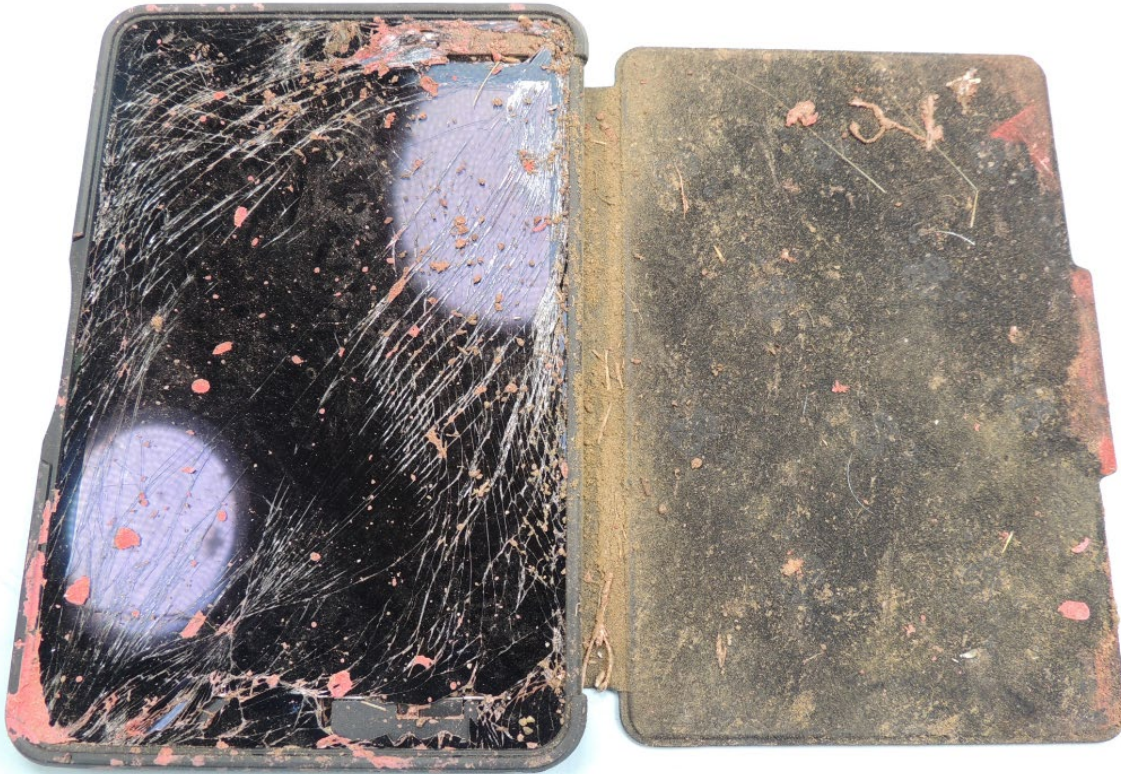


Figure 2: Apple iPad Mini 5 as received.