

NATIONAL TRANSPORTATION SAFETY BOARD

Vehicle Recorder Division

Washington, D.C. 20594

April 30, 2019

RECORDED FLIGHT DATA

Specialist's Factual Report

By Charles Cates

1. EVENT SUMMARY

Location: Farmington, NM
Date: March 31, 2019
Aircraft: Cirrus SR22
Registration: N173CT
Operator: Private
NTSB Number: WPR19FA103

2. GROUP

A group was not convened.

3. DETAILS OF INVESTIGATION

The National Transportation Safety Board (NTSB) Vehicle Recorder Division received the following devices:

Device Manufacturer/Model:	Aerosance RDM
Device Serial Number:	N/A

Device Manufacturer/Model:	Avidyne MFD CF Card
Device Serial Number:	N/A

3.1. Aerosance RDM Description

The Aerosance recoverable data module (RDM) is a crash-hardened data storage unit installed in the tail of some Cirrus aircraft. The unit records flight, engine, and autopilot parameters. Data is logged once per second and stored internally on a Compact Flash (CF) card installed inside the crash-hardened enclosure. When the storage limit of the memory device is reached, the oldest recording is deleted.

3.2. Device Condition

Upon arrival at the Vehicle Recorder Laboratory, an examination revealed the unit had sustained minor impact damage (figure 1), however the internal CF card was undamaged

(figure 2). The damaged exterior of the RDM after removal from its protective sleeve is shown in figure 1. The undamaged CF card removed from the RDM is shown in figure 2.



Figure 1. Photo of damaged unit



Figure 2. Photo of undamaged CF card inside the unit.

3.3. Data Description

The data extracted included about 135 total hours including information from October 22, 2017 through October 13, 2018. The event occurred on March 31, 2019. There were no data pertinent to the event recorded on the device.

4. Avidyne MFD CF Card

4.1 Avidyne MFD CF Card Description

The Avidyne MFD can store engine and aircraft parameters to a CF card in the device. The card was found separated from the device and sent to the Vehicle Recorder Laboratory for analysis.

4.2 Device Condition

Upon arrival at the Vehicle Recorder Laboratory it was evident the device had sustained major impact damage. The card was folded and creased. See figure 3 for the as received condition of the card.



Figure 3. Photos of damaged CF card.

4.3 Data Description

This device is capable of storing data in the non-volatile memory (NVM)¹. The card was folded across the main memory chip, cracking it in half. The extent of the damage precluded any recovery procedures therefore no data pertinent to the event were recovered.

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