

National Transportation Safety Board

Office of Research and Engineering

Washington, DC 20594



CEN22FA433

ELECTRONIC DEVICES

Specialist's Factual Report

June 13, 2023

A. ACCIDENT

Location: Yankton, South Dakota
Date: September 27, 2022
Time: 1030 central daylight time (CDT)
Airplanes: Airgyro AG915 Spartan, N499AG

B. ELECTRONIC DEVICES SPECIALIST

Specialist: W. Deven Chen
Electrical Engineer – Recorder Specialist
National Transportation Safety Board (NTSB)

C. DETAILS OF THE INVESTIGATION

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

Recorder Manufacturer/Model:	Kanardia Emsis 80mm
Recorder Serial Number:	unknown
Recorder Manufacturer/Model:	unknown vertical speed indicator (VSI)
Recorder Serial Number:	unknown

1.0 Kanardia Emsis – Description

The Kanardia Emsis is an engine information system with a color display. It is featured in either a 80-mm or a 3.5-inch version. The Emsis has a built-in global positioning system (GPS), an altitude and heading reference system (AHRS), pressure measurement system and more. The unit can be used as a standalone instrument or a secondary EMS (engine monitor system), PFD (primary flight display) or navigation instrument in conjunction with other avionic devices.

The Emsis automatically keeps a log of flights and stores them in its internal non-volatile memory (NVM). Flight logs can be copied to a standard microSD card inserted into the slot provided on the front of the unit. Data can be exported in engineering units, in a comma-separated value (CSV) format.

1.1 Kanardia Emsis – Condition and Data Recovery

The Kanardia Emsis 80mm had sustained severe fire damage as shown in figures 1 and 2. There was no microSD card presented in the front card slot. The extent of the damage precluded normal and advanced recovery procedures, and

additional attempts were unsuccessful in yielding usable data. No data pertinent to the event were recovered.



Figure 1. Front and back views of the Kanardia Emsis 80mm as received.



Figure 2. Internal view of the Kanardia Emsis 80mm as received.

2.0 Unknown VSI - Description

The vertical speed indicator provides climb and descent information to the pilot.

2.1 Unknown VSI - Condition and Data Recovery

The unknown VSI had sustained severe fire damage, as shown in figures 3 and 4. The extent of the damage precluded normal and advanced recovery procedures, and additional attempts were unsuccessful in yielding usable data. No data pertinent to the event were recovered.

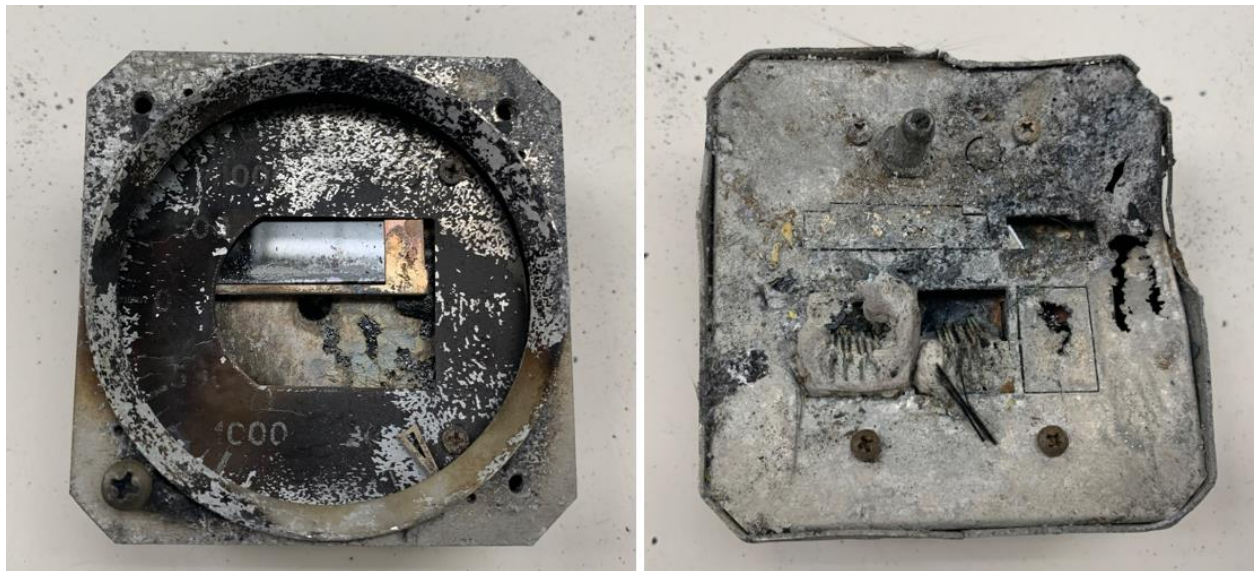


Figure 3. Front and back views of the unknown VSI as received.



Figure 4. Internal view of the unknown VSI as received.

Submitted by:

W. Deven Chen
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