

NATIONAL TRANSPORTATION SAFETY BOARD

Vehicle Recorder Division
Washington, D.C. 20594

December 9, 2019

Electronic Device

**Specialist's Factual Report
By Deven Chen**

1. EVENT SUMMARY

Location: Fort McDowell, Arizona
Date: April 16, 2019
Aircraft: Bell 206B
Registration: N61PH
Operator: Private
NTSB Number: WPR19FA109

On April 16, 2019, at 0706 mountain standard time, a Bell 206B experimental helicopter, N61PH, impacted an alfalfa field, about 1 mile south of Fort McDowell, Arizona. The commercial pilot and pilot-rated passenger were fatally injured. The helicopter was destroyed. The helicopter was registered to TRE Aviation Corporation and operated by Van Horn Aviation, LLC for research and development flight testing under the provisions of Title 14 *Code of Federal Regulations* Part 91. Visual meteorological conditions prevailed and a flight plan was not filed. The second leg of the test flight originated from Falcon Field (FFZ), Mesa, Arizona at 0632.

2. GROUP

A group was not convened.

3. DETAILS OF INVESTIGATION

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

Device Manufacturer/Model:	Cosworth Pi Sigma Elite System
Serial Number:	Unknown

3.1. Device Description

The Cosworth Pi Sigma Elite System is a data acquisition and electronic control system designed around modular components which have common mechanical and electrical

connections. These devices convert analog waveforms collected from sensors into digital values for processing.

3.2. Data Recovery

Upon arrival at the Vehicle Recorder Division, an exterior examination revealed severe thermal damage to the device, as shown in Figure 1. No functional memory chips were found on the device, as shown in Figure 2. No data were recovered from the device.



Figure 1: Top, bottom and inside of Cosworth device as received.

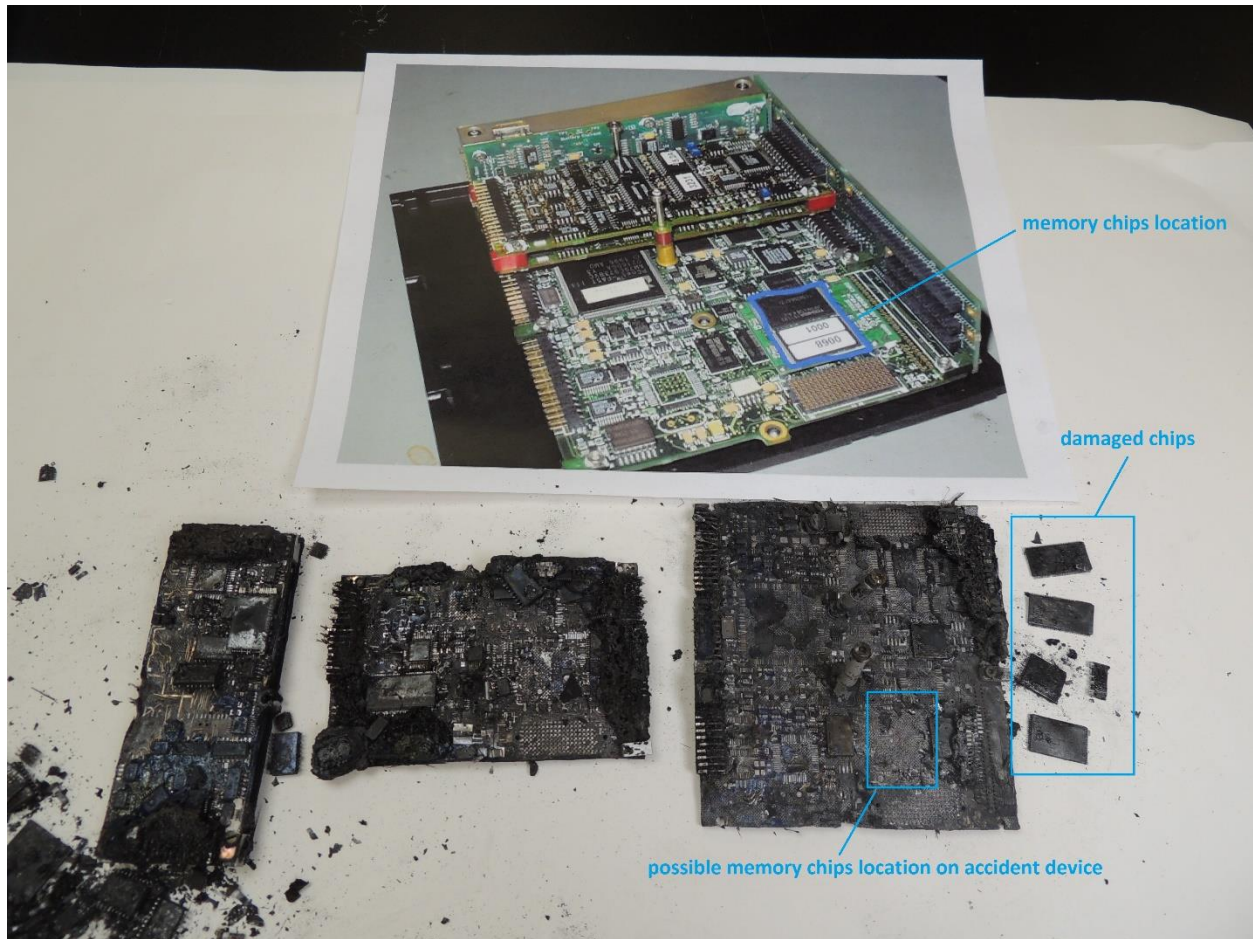


Figure 2: Circuit boards of received Cosworth device compared to circuitry with NVM¹ on an undamaged Cosworth device.

¹ NVM: Non-Volatile Memory, a type of computer memory that does not need power to retain data.