

NATIONAL TRANSPORTATION SAFETY BOARD
Vehicle Recorder Division
Washington, DC 20594

February 22, 2018

Onboard Image Recorder

Specialist's Factual Report
By Jane Foster

1. EVENT

Location: Oakland, Iowa
Date: December 12, 2017
Aircraft: 2004 IC, Model 3S530,
Operator: Riverside Community School District
NTSB Number: HWY18MH003

2. GROUP

A group was not convened.

3. SUMMARY

For a summary of the crash, refer to the *Crash Summary Report*, which can be found in the NTSB docket for this investigation.

4. DETAILS OF INVESTIGATION

The National Transportation Safety Board (NTSB) Vehicle Recorder Division recovered the following on-board camera recording system:

Recorder Manufacturer/Model: **REI RV-4001 Version 2.0**
Recorder Serial Number: **Unknown**

4.1. Recorder Description

The REI RV-4001 Version 2.0 is a camera system capable of recording four camera inputs. The school bus involved in the crash had two interior facing cameras and no exterior facing cameras. One camera was in the rear of the bus looking toward the front of the bus and the other camera was in the front of the bus looking toward the rear of the bus.

4.2. Recorder Damage

It was evident that the REI RV-4001 Version 2.0 had sustained significant heat and structural damage. The device was disassembled at the manufacturer's facility and

the hard drive was removed. The hard drive was sent to a third party hard drive recovery company for further analysis. Figures 1 through 4 show the extent of the damage and the disassembly of the device. Figure 5 shows an exemplar undamaged version of the hard drive and suspension system.

Figure 1. Image showing the top of the recording system and the hard drive casing after removal from the school bus.



Figure 2. Image showing the bottom of the recording system and the hard drive casing after removal from the school bus.



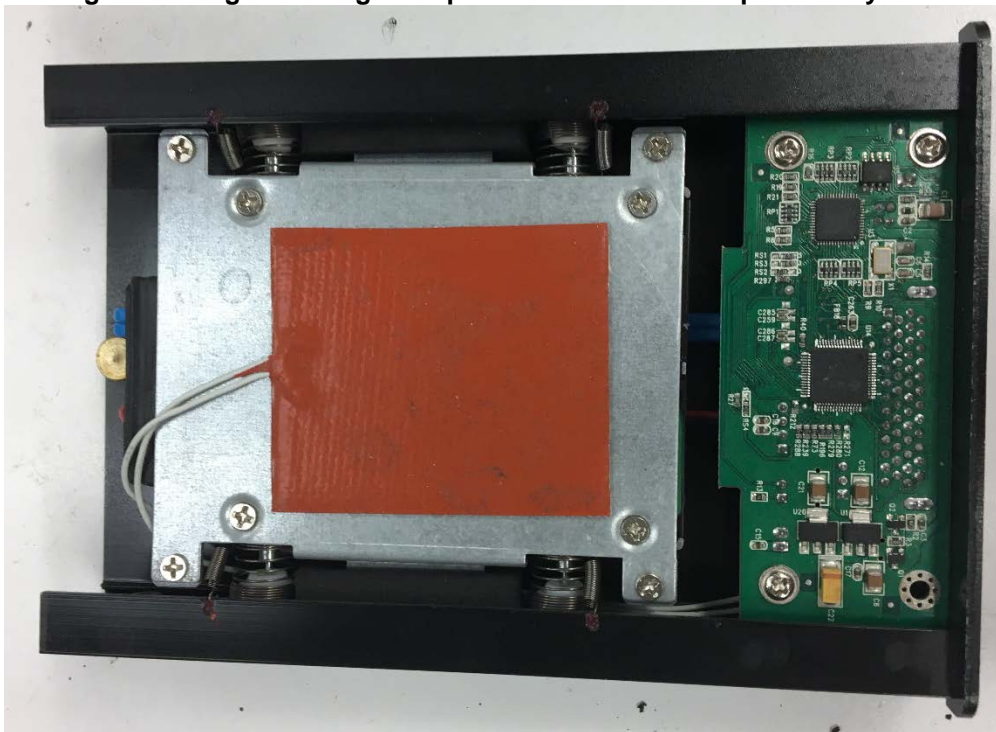
Figure 3. Image showing the interior of the hard drive casing.



Figure 4. Image showing the removed hard drive from casing.



Figure 5. Image showing exemplar hard drive and suspension system.



4.3. Video Files

Due to the extreme heat damage to the device, no video files could be recovered. Neither the NTSB or a third party hard drive recovery vendor were successful in recovering the data.