

NATIONAL TRANSPORTATION SAFETY BOARD

Vehicle Recorder Division
Washington, D.C. 20594

July 12, 2018

Engine Monitor Device (EDM)

Specialist's Factual Report
By Sean Payne

1. EVENT SUMMARY

Location: Pineville, Louisiana
Date: November 10, 2017
Aircraft: Temco GC-1B
Registration: N2363B
Operator: Private
NTSB Number: CEN18FA030

2. GROUP

A group was not convened.

3. DETAILS OF INVESTIGATION

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

Device Manufacturer/Model:	JPI EDM-700
Serial Number:	18560

3.1. Device Description

The J. P. Instruments EDM-700/800 is a panel mounted gauge that the operator can monitor and record up to 24 parameters related to engine operations. Depending on the installation engine parameters monitored can include: Exhaust Gas Temperature (EGT) Cylinder Head Temperature (CHT) Oil Pressure and Temperature Manifold Pressure Outside Air Temperature Turbine inlet Temperature Engine Revolutions per Minute Compressor Discharge Temperature Fuel Flow Carburetor Temperature Battery Voltage The unit can also calculate, in real-time, horsepower, fuel used, shock cooling rate and EGT differentials between the highest and lowest cylinder temperatures. The calculations are also based on the aircraft installation. The unit contains non-volatile memory¹ for data storage of the parameters recorded and calculated. The rate at which the data is stored is selectable by the operator from 2 to 500 seconds per sample. The memory can store

¹ Non-volatile memory (NVM) – semi-conductor memory that does not need power applied to retain data.

up to 20 hours of data at a 6 second sample rate. The data can then be downloaded by the operator using the J.P. Instruments software.

3.2. Device Condition

Upon arrival at the Vehicle Recorder Laboratory, an examination revealed the unit had not sustained any damage, however, information could not be extracted using the manufacturer's software. The unit was disassembled and the memory chips were removed and read out. The unit is shown in figure 1.



Figure 1. Photo of damaged unit

3.3. Data Description

The data extracted included information from January 1, 2016 through October 12, 2017. The event occurred on November 10, 2017. The timing information on this device is user set and can be incorrect. Attempts were made to correlate the data on the EDM to pilot logs. The logs were unable to be obtained. The last recording on October 12 was not consistent with a flight. There were no data pertinent to the event recorded on the device.