

National Transportation Safety Board

Office of Aviation Safety

Washington, DC 20594



ERA24LA257

DYNON DATA MONITOR FACTUAL REPORT

November 26, 2024

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A. ACCIDENT

Location: Zephyrhills, FL

Date: June 8, 2024

Time: 1016 EDT

1416 UTC

Airplane: Piper PA28-235 Registration: N15363

Component: Dynon SV-HDX1100 (P/N: 503273-000, S/N: 24040)

B. DYNON DATA MONITOR FACTUAL REPORT

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NTSB
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C. SUMMARY

On June 8th, 2024, at 1016 eastern daylight time, a Piper PA28-235, N15363, was substantially damaged when it was involved in an accident near Zephyrhills, Florida. The pilot and the flight instructor were not injured. The airplane was operated as a Title 14 *Code of Federal Regulations* Part 91 instructional flight.

D. DETAILS OF THE EXAMINATION

1.0 Dynon SV-HDX1100 Description

The Dynon SV-HDX1100 is part of the Dynon SkyView HDX avionics systems which can store various data related to the aircraft's performance and status such as: flight data, engine data, navigational data, and safety data.

2.0 Dynon Data Recovery

The Dynon data was extracted and exported to a USB drive in a comma-separated value (CSV) format by the NTSB IIC using the manufacturer's instructions. The time recorded in the Dynon was in Coordinated Universal Time (UTC).

3.0 Dynon Data Description

The Dynon PFD recorded engine data from the accident flight. The recorded data revealed a sharp increase in engine RPM and manifold pressure which is consistent with full power being applied at approximately 14:15:45 (hh:mm:ss) UTC.

The engine reached full RPM and manifold pressure at 14:15:56 UTC. The engine RPM and manifold pressure maintained full power until a sudden drop in RPM and manifold pressure starting at 14:16:10 UTC, the engine RPM dropped from 2554 RPM to 1399 RPM within 6 seconds, the manifold pressure dropped from 28" Hg to 20.8" Hg within the same time period. The engine RPM then increased to approximately 2500 RPM for 2 seconds, followed by another drop of RPM to 1841 RPM, followed by another increase of RPM to 2560 RPM, followed by an immediate decrease of RPM to 1170 RPM. The engine RPM then increased one last time to 2370 RPM at 14:16:13 UTC and then another immediate reduction of RPM to approximately 1000 RPM until the engine shut down at 14:16:24 UTC. During the engine RPM fluctuations, the manifold pressure also went through several oscillations, indicating fluctuation of power.

While at full power, the engine data shows a steady increase of fuel flow reaching a maximum fuel flow of 18.8 gallons per hour (gph) at 14:15:58 UTC, while still at full power, the fuel flow began to steadily decrease. When the first reduction of RPM and manifold pressure was recorded, the fuel flow indicated 10.3 gph. During the RPM and manifold pressure fluctuations, the fuel flow varied between a high of 11.2 gph to a low of 6.9 gph. The Dynon system also recorded fuel pressure readings. At 14:15:42 UTC, just before the engine RPM advanced to full power, the fuel pressure was indicating about 23.4 psi. As the engine RPM advanced to full power, the fuel pressure decreased to 2.4 psi just before the first drop in engine RPM and manifold pressure. The fuel pressure remained between 3.4 psi to 2.4 psi during the timeframe that the engine RPM and manifold pressures were indicating fluctuations. Accident Flight Time from Start to Engine Shut Down: 12 minutes

4.0 Attachments

Appendix 1 - 2024-08-07-N15363-SN24040-16.4.6.10205-
USER_LOG_DATA.csv

Submitted by:

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