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Date: 10/19/2022

Subject: ERA23FA023 / Viking Engines and Student Pilot correspondence

Contact: Jordan Hall, Aero Adventure Employee

This correspondence is between Viking engines and the student pilot prior to the accident flight; this correspondence was sent via email.

“First full conversation started with Jordan on August 3rd of 2022, where he posted on our forum about a drip he had (it was the drain plug, and he just needed to use the correct sealer and screw in) I told him at that time, I could see multiple service bulletins that had not been adhered to. He responded he would talk tomorrow about it. I did not hear from him. He reached out to me on September 7th 2022 and sent over pictures, he asked about cost, lead time. I told him it needed updates, and he said he would drive it up as he was only in Miami.

He needed to update the flywheel, the flywheel coupler, centering bushing, more than likely the torsion damper (done every 5 years) as well as wiring and maybe more, but that is what I could see based on pictures.

On September 19th, he said he would bring the plane here for the updates, this would give us the opportunity to look it over as well. At that time he said both plane and engine had less than 50 hours. I do not know when this engine was sold, but later than 8 years ago, and the plane has exchanged owners a few times. He informed me that day, he did not have an operation manual. I sent him the information.

On September 20th, he mentioned something about the EIS warning light and trying to understand it. Noted the EIS stated 34.6 Hours. My response: The Viking View is supposed to only have one screen that align with the embossed letters Arkus the parameter. Something has been changed. The blinking light might be due to low voltage that goes away with RPM

October 11th, he sent an email and the linked video: "Fly the plane today with the Viking 110, the engine cut off for a moment at 1300' AGL. Then resumed full power as normal and ran through the landing and taxiing back to the hangar. Temps looked fine, fresh auto fuel. See the video below. Do you have an idea of what could cause this?"

Response:

Hey Jordan, So obviously there is nothing wrong with the engine as it ran perfect before and after. We are going to have to look at airframe components, every engine needs the following: Proper amount of air Electricity Fuel Lubricants Cooling Looking at the list above, it seems air, lubricants and cooling are likely not the issues. That leaves electricity and fuel. We didn't build the airframe, so difficult to troubleshoot from a distance, however, it seems equally likely to be either. If the engine is starved from fuel temporarily, a surge like that could happen. If electrical power was removed from the ECU or fuel pumps a similar surge could happen. Did you notice a fuel pressure drop? Were you flying with one or two fuel pumps engaged? Were you flying on single or dual batteries? Has anyone recently worked on the electrical or fuel systems?

In the following days he asked questions unrelated to the above, he didn't know where to change the oil and where the oil fill was, he asked for start up and shut down procedure, as he was unaware.

The last I heard from him was 6:43 PM October 12th, asking about an update on his computer (not needed) There wasn't a lot of knowledge on the engine, the airframe or operation. No questions asked about troubleshooting the issue he was having.

The video of his in flight issues the week prior: Jordan Hall In Flight - YouTube

Jordan Hall In Flight

The service bulletins are listed here: Service Bulletins — Viking & Valkyrie Power

(vikingaircraftengines.com)"