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Date: August 18, 2022

Subject: CEN22LA361

Contact: Springfield FSDO FAA Inspectors Loftus and Skelton

On August 3, 2022, about 1030 central daylight time, a Vans RV-10 airplane, N255CP, was substantially damaged when it was involved in an accident near Hurst, Illinois. The pilot was not injured. The airplane was operated as a Title 14 *Code of Federal Regulations* Part 91 maintenance test flight.

The following is a record of email correspondence with FAA Inspectors Nick Loftus and Justin Skelton:

8/8/22 - Email from Nick Loftus

I have included a synopsis of the circumstances of the accident involving N255CP as well as the maintenance record photos....I have included Inspector Justin Skelton on this email as well. He is the lead on this investigation. We are still waiting on the statement from the pilot and possible engine data from the avionics system. The avionics system wasn't damaged, but I am not sure if it has the capability to download historical engine data or not. Please feel free to contact Inspector Skelton or myself if you have any questions or need any additional information.

Synopsis:

N255CP, a Vans RV-10, departed Southern Illinois Airport (MDH) on Wednesday August 3, 2022 at approximately 10:15 a.m. CST. Approximately 15 minutes into the flight, the pilot began a descent to return to MDH. The pilot stated that he reduced the power and began a descent from 8,500 feet MSL. At approximately 2,500 feet MSL the pilot stated that he attempted to add power to level off, but the engine began running extremely rough and did not seem to

generate any additional power. The pilot stated that he began trouble shooting and added carburetor heat at approximately 1,800 feet MSL because he suspected that carburetor ice may be the issue. The pilot stated that he did not see a noticeable change to the engine power after applying the carburetor heat. The pilot stated that the engine roughness eventually went away, but the power never increased. The pilot stated that he did not believe he would be able to make it back to MDH with the current power available and elected to head for Dury Estates Airport (IL71) which is a private airport approximately 5 miles east/northeast of MDH. The pilot stated that as he approached IL71 he did not believe he had enough altitude to clear a line of trees near the approach end of runway 19. The aircraft landed in a soybean field approximately 1000 feet from the approach end of runway 19. The pilot stated that he got as slow as possible as he approached touchdown and attempted to complete a full stall landing into the soybean field. The pilot stated that at approximately 300 feet AGL the propeller stopped on the horizontal position. He stated that the engine was still running when he added power at 2,500 feet MSL, but was not producing enough power to maintain level flight. Upon questioning, the pilot was unable to provide an answer as to when the engine actually stopped running, but did confirm that he did not shut the engine off intentionally. The aircraft had recently received an annual inspection from the pilot/owner. The pilot stated that the aircraft had not been flown for approximately a year and that the fuel in the tanks was the fuel that had been in it when it was flown last.

8/16/22 - Email from Nick Loftus

I don't think there would be any issue with them moving it based on what we saw. I feel like we documented everything possible where it was sitting. We documented the damage to the main landing gear which is the main location of damage. I don't think moving it will affect the engine which is the main concern right now. He did send me the engine data and his statement. I have attached those to this email. If you give the go ahead to move it, I will let him know to do so while preserving everything as best as possible and not to touch the engine. Let me know what you think.

8/16/22 - Email from Justin Skelton

The aircraft had just come out of an annual inspection. During that down time they had installed a new carburetor because he has been having issues in the past with the engine doing this same thing but did not result in an accident. They thought they were fighting carb ice so they installed the new carburetor and a new carb ice system upgrade on the aircraft. They had already moved the aircraft into a hangar removed the cowlings, drained the fuel, checked the carb bowl, pulled the leads and

spark plugs and pulled the interior before we even got notified of the accident and we instructed them at that time to stop all maintenance and work on the aircraft immediately. I am uncertain on the actual cause, but I do not believe it is carb ice, I believe it is something more internal to the engine. I am no expert and looking at downloaded engine data but I think it may tell you something but that is my own personal opinion.

8/16/22 - Email from Nick Loftus

I think they originally thought that it would be an incident and started to take it apart to look at it. I believe they realized that there was more damage than originally thought and decided to call it in. The accident occurred on August 3rd but it wasn't called in until August 4th. When he sent a few photos to the NTSB (I believe Shaun Williams) it was determined that it would qualify as substantial damage and was classified as an accident. At that point they were told not to do anything further. They didn't pull the entire carb, but had removed the carb bowl. The fuel that they said they retrieved from the carb bowl was placed in a glass jar and we were able to look at it when we arrived. The maintenance log entry shows the replacement of the carb was completed in 2020. That entry is found in the photo titled Engine Log 2 that I sent you last week. The maintenance logs are fairly basic and do not include much detail. I know the pilot suspected carb ice, but based on the conditions that day and his description of the event it doesn't seem to be likely. As far as an issue with the carburetor itself, I didn't see anything that would indicate an issue, but we did not completely remove it to examine it either.

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