

## Inspectors Statement

My Name is Cornelius J. Baker, I am an Aviation Safety Inspector assigned to the West Columbia Flight Standards District Office.

On December 2, 2013 at approximately 1656 I received a call from the Regional Operation Center about an aircraft that went down near the Edgefield Airport (6J6). The aircraft is N355PT a Moffitt Oscar/ Kit Prostar PT2 experimental amateur built aircraft. The pilot is Larry Putt the registered owner of the aircraft. Mr. Putt was unhurt in the accident. I drove to the scene to inspect the aircraft and speak with the pilot/owner. Mr. Putt had already left the scene when I arrived, so I inspected the aircraft and took pictures. The aircraft hit a tree and power lines on its way to the ground. The aircraft was substantially damaged in the accident.



I placed a call to Mr. Putt and he explained that he had fueled before taking off from Twin Lakes Airport (S17) to fly a short test flight. He had sold the aircraft the day before and was test flying it before delivering the aircraft the next day. Mr. Putt went on to say, "Everything seemed normal and the aircraft was flying great. As I approached the Edgefield Airport the engine quit. I made several attempts to restart the engine but it would not start. I saw that I wasn't going to make the airport so I tried to put the aircraft into a clearing but didn't make it."

In my inspection of the aircraft at the accident scene there was fuel in both tanks, the carburetor heat was pulled on, the mixture and throttle were full forward. I could not do any inspection of the engine area because of the aircraft's position. I received permission from NTSB to allow the owner to move the aircraft back to his hangar. I made arrangements with Mr. Putt to meet with him when the aircraft was moved.

On December 6, 2013 I drove to Twin Lakes Airport and met Mr. Putt at his hangar. Mr. Putt had already removed the cowling from the engine. I noticed the fuel gascolator bowl was hanging from its safety wire. The owner said it was that way when he removed the cowling. He thought it had happened when the aircraft hit to ground. A visual inspection of the engine only found a hole in the #1 cylinder valve cover. This was caused by the cowling screws on impact with the ground. The magnetos and leads were all intact and appeared clean fairly new as if recent maintenance had been performed on them.



We inspected the air box for blockage and found none. Mr. Putt removed the air box and I inspected the carburetor venturi and no problems were noted. I had Mr. Putt remove the carburetor drain plug and we found no fuel in the carburetor. I had Mr. Putt turn the fuel selector to on and I took a sample of fuel from the open gascolator. Fuel ran freely from the gascolator. We then removed the fuel inlet line at the carburetor and blew air through it to the gascolator. It was clear with no blockage. I then went back to the gascolator and inspected it further. Between the thumb wheel and the gascolator bowl there is supposed to be an inverted bell that applies pressure to the bottom of the bowl. It is missing from the accident aircraft. There was no observable impact damage to the gascolator. Mr. Putt said the gascolator always seemed to be loose, but the thumb wheel would not turn any more to tighten it further.



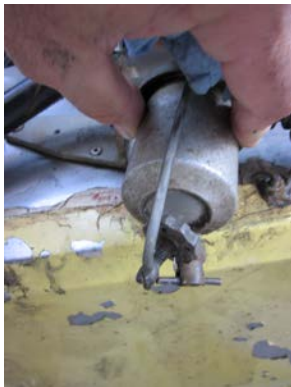
I inspected the bottom cowling and there was no observable impact damage on it that would have been consistent with the gascolator striking it. Oil and dirt residue were found throughout the cowling. In the area where the gascolator was mounted the oil and dirt residue was gone and the cowling appeared clean. The clean area is consistent with a leak that had occurred in flight and not post-accident. The aircraft was resting to the right and nose low and any fuel would have run forward and not aft as I found with the accident aircraft. The gascolator was mounted on the right side of the aircraft on the fire wall.



After reviewing the aircraft maintenance logbooks and Mr. Putt's flight times, I drove back to the accident site. I was able to find the gascolator gasket but not the missing bell from the gascolator. The gasket was a cork gasket that was handmade, as magic marker lines are still visible on the gasket.



Mr. Putt said he believes the gascolator was salvaged from a Piper PA-28 aircraft at the time N355PT was built. The gascolator is consistent with the Piper part number 63839-03 gascolator. The Piper gasket for this gascolator is part number 462-049. The bail assembly Piper part number 494 644 includes the bail and thumb wheel assembly.



N355PT



Used Piper 63839-03

On December 12, 2013 I spoke with Bob Martellotti from Piper Aircraft and he provided me with drawings and Service Letter 1141 dated 4/27/2011. This service letter calls out a new procedure for safety wiring the bail assembly on the Piper gascolator. What they have found is people are tightening the thumb wheel and causing the bail to expand out. When that happens the thumb wheel runs out of thread and does not tighten properly. The gasket that Piper calls out for this gascolator is made from rubber and not cork and it should have a thickness of 0.109 (7/64). The cork gasket found at the accident site was approximately 0.0625 (1/16) thick.

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