

## Possible Drone Strike With Cessna 140

On the morning of Thursday June 15 I departed Phoenix Deer Valley Airport (DVT) in my Cessna 140, and at approximately 09:37 (based on FlightAware flight tracking) I struck what I assumed to be a large bird near the intersection of Cave Creek Rd and Carefree Highway, approximately 13nm NE of DVT. I was northbound climbing through 5500 ft MSL / 3500 AGL at approximately 80kts at the time. I felt something hit and heard a bang, and saw something large and dark (seemed roughly basketball-sized) go past me in a blur on my left and strike the left wing just outboard of the pitot tube and continue on over the top of the wing. It happened so quickly that I thought the impact jolt and noise were caused by the wing strike.

After verifying that the aircraft was still flying well and fully controllable I made a left 180 turn to see if I could spot a falling bird but saw nothing. I then decided to return to DVT to check for any additional damage, and made a right 360 turn to give myself time to get the ATIS information before contacting the tower. DVT Tower was informed of the strike on initial call-up. They were very helpful in expediting my return and making sure that I didn't need assistance.

After landing I taxied to my hangar and was met by someone from DVT Airport Operations who asked for more details and took photos. I first checked the left wing leading edge and found a shallow dent approximately five inches long where I saw the strike occur. I then went to the front of the plane and discovered the propeller spinner was completely missing, although the spinner mounting bracket was still attached to the prop. One propeller blade had large sections near the tip where the epoxy paint coating had been abraded down to bare metal, and damage to the leading edge. The other blade showed less contact, but does appear to have witness marks of some type of paint or plastic. Note that this prop was installed new in September 2020 and had no prior damage or marks in the paint. The DVT Ops person took pictures and left, with both of us still assuming it had been a bird strike.

On Saturday June 17 I returned to the hangar to further inspect the aircraft. I opened the engine cowling to look for any feathers, blood, or remains from the bird that might have made it through the cooling grill and into the engine compartment. There were no bird parts, nor were there any signs of bird parts anywhere else on the plane after a detailed search. At this point I found a broken engine cowl latch at the right rear position. Closer inspection found a dent in the right front cowling, with the impact apparently causing the latch to shear. I am certain that this latch was intact and working properly when I did my preflight before departing.

Based on the complete lack of bird remains found anywhere on the aircraft or seen at the moment of impact, along with the amount and type of damage done, I am now quite certain that I actually struck a drone of some type. I have no firm evidence other than the possible witness marks on the prop blade, but I don't see how this could have been caused by anything else. Many years ago I hit a dove with this same plane and the carnage was truly amazing, so I know what a bird strike looks like. This strike had absolutely none of that.

The prop was taken to Warner Propeller in Tucson for repair, and they confirmed it was a drone strike.