

Brent Crow – Flight Safety Officer Phoenix Incident Log/Notes

Friday Sept 13th 2019:

- Line service stopped by at 17:40 indicating that one of our Archers, N4403Z was on fire in Marana. He asked what to do. I told him to tell Dispatch to activate the ERP.
- I gathered the following information from Dispatch: N4403Z, 1730, Brendan Fisher – IP aboard with Sergio Gabriel Arana Gallardo and Edgar Gamboa as students aboard. All were safe, only damage to aircraft. The crew said the aircraft was completely burned up and firefighters were responding. IP phone [REDACTED]. Dispatch stated that this happened after the crew taxied in after landing at Marana.
- I called Jon Micetic at 17:45 to inform him (as I was helping Dispatch make initial notification). Received voice mail which was not set up.
- I called David Morse and informed him of the event. He was onsite and showed up at the safety office afterwards to help with initial actions.
- I informed my Deputy Eric Fahrner to assist with calling out Kyle Portela and Chase Headman.
- Between David and I, the plan was to send me in my vehicle to Marana so I can pick up the instructor and take photos of the aircraft and determine need to call NTSB.
- I sent an email to Global Safety as required with preliminary information at 6:14pm and then left for KAVQ.
- Plan became that two DA40 crews would fly down to Marana to pick up the students, and I would bring back the IP.
- Arrived at KAVQ at 08:50 after stopping to swap cell phones with my wife, as mine was malfunctioning.
- Met up with instructor and received gate code for KAVQ of 8753.
- Arrived on scene of fire and took initial photos and received brief statement from IP. He described that he had arrived at Marana, parked and took a restroom/fuel break. The aircraft was refueled. They returned to the aircraft (students had swapped seats). They attempted the first start with Lycoming method with throttle at idle and mixture rich. Engine did not start. Second attempt was with throttle at idle, and mixture at idle cut off. During the crank, throttle was slowly advanced. Once engine began to catch, the mixture was enriched. Then engine died. The crew started smelling burning electrical/plastic and exited the aircraft to find flames/smoke from bottom of cowling. They left the aircraft and called 911.
- Visually, fire seemed limited to the engine compartment. There was two large holes in the lower cowling presumed to be made by the firefighters who responded to help them extinguish the fire. Fire appears to have been concentrated in the accessory section of the engine. Photos were taken of the aircraft damage at this time, without disturbing the evidence. I noted the firewall was waffled and crispy, which indicated substantial damage. I called Chase and he agreed that this constituted substantial damage and a need to get NTSB involved.
- Called NTSB watch officer Daniel Maas at 21:20 local time and provided information. They stated the investigator would call me back.
- Called NTSB watch officer back at 22:20 local time and asked if an investigator had been assigned, since I had not received a call back. They stated that they don't police when the investigator is assigned, but that the investigator may likely call back tomorrow. The aircraft was assigned to

Andrew Swick and was released for transport but that no one was to disturb the engine compartment area. Only wings could be disassembled to allow for transport.

- Called Chase around 22:35 to let him know the aircraft was released for transport only.
- Collected data cards (as I was worried they may be stolen or damaged by weather) and secured aircraft and took technical log. Called David Morse that we were leaving KAVQ at around 2200.
- Other DA40 that had traveled down to Marana became stranded there with what they suspected was a bad magneto. The crew was JOH MHERN and BCAST. Together with FIE (Fisher) we all returned back to Falcon in my vehicle around 0030 am Saturday.

Saturday Sept 14th, 2019:

- Received phone call from Lou Nemeth around 1020 that all Archers were to be grounded.
- Called Dispatch and informed them that Archer TXs are grounded (around 1025) and that any flights currently away from base may return to base.
- Called Chase and informed him of the Fleet Grounding. (around 1030)
- Got my phone sorted with Apple and arrived at CAE around 1145.
- Was notified by Chase that a managers meeting was happening around 1330.
- Kathryn Whitaker called from Piper stating she would like to support, informed her of the managers meeting and invited her.
- Managers meeting at 1330 occurred. Brainstormed possible causal factors.
- Kat suggested we call NTSB and ask for assistance due to the Fleet being grounded.
- 15:10 Called NTSB Deputy Regional Chief for West/Pacific Region Dennis Hogenson at [REDACTED] and asked what we could do. He stated he will have the investigator call me and work an action plan and to send him a few photos and my contact information as a response to his email he was sending me.
- I sent Dennis my contact information and a few photos at 15:27.
- At 1531, Andrew Swick contacted me and stated that he had been assigned and we made arrangements to meet at the aircraft at 1800 at Marana Airport.
- Katy, myself and Chase Headman left for Marana around 1600
- Arrived at Marana airport at 17:50. Met Andrew Swick. Photographed scene. Cowls were removed by Chase.
- At Andrews direction, the fuel lines leading to the carb, the line to the pump and the line to the primer were removed for analysis.
- Cowls were resecured and we departed Marana around 20:05. Decided to meet up at CAE tomorrow to test the fuel lines on a sister aircraft. Returned to CAE at 09:50. Grabbed dinner for Chase and I and I left work around 1030.

Sunday Sept 15, 2019

- Arrived at CAE at 0930
- Met Andrew and Katy at 1000 at Hangar. Cody Howard provided N4403M for testing and decowled it in the Fleet bay of the Hangar.
- Doug uninstalled fuel lines and re-installed fuel lines from N4403Z.
- We conducted a pressure test on the lines using the aux fuel pump and onboard battery. We had power/pump on for 15 minutes – no leaks.

- We conducted an engine run test of the aircraft with cowls off and a person on standby with fire extinguisher. Followed crews start procedures. Ran aircraft up to temperature 199 oil temp, then shut down. No leaks.
- We decided to test a theory that the solenoid for the primer may be leaking. I obtained a temperature sensor from home. We secured the temperature sensor to the aircraft's primer solenoid so that we could read the temp through the cowling, and resecured the cowls.
- We conducted another ground run with engine temperatures up to 199 and shut down the engine. Oil temperatures jumped to 204 on shutdown. Primer solenoid was 113 initially, but climbed to 149 degrees over 25 minutes or so. At 40 minutes it was 142.
- We also pumped the throttle to see how many pumps it would take to see fuel in the Carb air box. Approx 1 pump every second, fuel was seen in the air box after 5 seconds.
- Magnetos were going to be sent to Varga, Carb was to be sent for teardown at Precision in Washington via one day shipping. Andrew would inform us when it would be so we could be party to the teardown.
- I continued working to build an excel spreadsheet of all data collected on each engine fire thus far.
- Asked Andrew if I could download the data from the MFD data card. He replied yes at 1015pm. Pulled data and found oil temp at shutdown 28 minutes prior to the fire at 208F.

Monday Sept 16

- Arrived at 0735
- Meeting with Management at 0830
- Called Andrew at 11:15 looking to determine if he was going down to Marana to get the fuel primer solenoid off of N4403Z. Andrew states he asked his supervisor and he doesn't need to be present.
- Called Katy, who stated she will head down there after her managers meeting. She invited CAE to send a rep if we wanted to, but I opted out.
- Chase wanted to know where the magnetos were being sent, as he has called the local shop and they state they are awaiting the mags, but they have not arrived. Andrew states he is unable to take them today, but he will take them first thing tomorrow. Chase has made arrangements to have them dropped off at 0800 tomorrow.