

Usman Khan's Statement

Monday, November 7th, Wasim Gul, the pilot with whom I was scheduled to fly with, sent me the flight plan at 2:39 am. The flight plan was from KINF to Tuscaloosa. I arrived at the airport around 5:15 am and Wasim was refueling the plane at that time. The tank was full and we had 26.1 gallons of usable fuel. The weather and wind conditions were VFR, and so we took that opportunity of clear weather and wind to take off towards the direction of northwest, around 5:45 am. We climbed to 4500 feet and then ascended to 5300 feet to avoid clouds.

We headed towards our destination of Tuscaloosa, with Wasim being PIC and handling the radio. It took us around 3.4 hours to reach there. Before landing in Tuscaloosa, we noticed that there was an issue with the fuel pressure gauge. The gauge was inconsistent and showing intermittently high/low. Once we arrived, we started to discuss the fuel pressure gauge. I continued to monitor them and I searched online about responding to any issues with the fuel pressure gauge. After monitoring them for a while, I let Wasim know that the fuel pressure gauges were now consistent in the green. I also gained clarification from Flight Scheduler Pro that there was a squawk written about the fuel pressure in-ops and according to the MEL if we put a note showing the fuel pressure gauges as inoperative in the cockpit, then we can take off. I also showed him the fuel gauge, letting him know the quantity of fuel we had remaining. The bubble was at the top in the green area. Since we flew 3.4 hours at 3.6 gallons per hour, we had 13.86 gallons remaining. Also, considering the time the plane was idle on the ground, it burned approximately 5 gallons of fuel at idle rpms approx 1800-2000, leaving us with 7.86 gallons.

We took off from KTCL with Wasim as PIC and the one giving out the radio calls. Which I am sure can be proven with the recording from the ATC. From there we headed towards 08A, the city of Wetumpka, and reached there in about 50 minutes. During this, we consumed about 4 gallons of fuel per hour due to the headwinds, instead of the initial 3.6 gallons per hour we consumed on our way to KTCL. By the time we reached 08A, we had approximately 3.86 gallons remaining. Wasim decided to refuel 5 more gallons from 08A resulting in 8.86 gallons of fuel in our plane. I was reluctant about the amount of fuel and felt we needed more but he refused and said that because he is a CFI, his calculations are more accurate and he holds more authority in the decision-making. Wasim felt that we had enough fuel to reach Inverness. I insisted that we did not have enough fuel to reach Inverness. He told me that the fuel gauges were inaccurate anyways and that I should not consider them when calculating how much fuel we had remaining. He had also done the calculations, and felt that they were more accurate as compared to mine, due to him being a CFI. He felt that we were okay to fly with the amount of fuel we had. I was still hesitant and continue to protest against flying to Inverness. And so he agreed to stop at another airport if we required more fuel. He was saying that he did not want to

fill more fuel now because he felt that Garrett, the company's representative, would not refund him for the amount he spends on refueling, so he only spent what he felt was necessary. I continued to insist and did not have a means of my own to pay for the fuel or I would have. He continued to convince me that we can stop at another airport on the way. So, eventually I agreed and told him that I will head towards 2J9, Quincy Municipal airport, and he would refuel more there, because I knew that we had more than enough fuel to fly to 2J9.

I was the PIC when we took off from 08A and headed towards 2J9. It took about 1.3 hours to reach there and due to the headwinds, we consumed 4 gallons of fuel per hour, leaving us with 3.86 gallons of fuel. Wasim pointed out to me that even according to the fuel gauge we still had enough fuel so at 2J9, he said he will refuel only 4 more gallons because that was more than enough to reach Inverness. Again, I disagreed and begged him to put in more because the plane would not reach Inverness and I suggested that instead of Inverness we go to Cross City, since he continuously refused to refuel more. The distance from 2J9 to Cross City was 95 miles and about 1 hour of flight time. Before taking off we checked the weather conditions at 2J9 headed towards Cross City and they were VFR.

We left 2J9 with me as PIC and we had about 7.66 gallons of fuel which would have allowed us to fly for about 1.75 hours and we had 30 minutes of reserve fuel. 45 miles before approaching Cross City the headwinds became stronger and fuel consumption increased. I continued to monitor the fuel gauges. 30 minutes prior it showed about 6 more gallons of fuel, but then 10-15 minutes later it showed we no longer had enough fuel. The right tank had only about 2 gallons of fuel left and so we switched to the left tank which had about 2-3 gallons of fuel left. We intermittently switched between both tanks until both tanks no longer had fuel. 10-15 min before we made an emergency landing, we lost the engine and I attempted to restart it. The engine restarted for about 1 minute before it failed to restart again. At that time, we were at 2500 ft and about 5 to 6 miles away from the airport's runway 13. Once the engine failed we quickly came down from 2500 ft to 600 ft AGL and we were gliding at the best glide speed. But due to the strong headwinds and the aircraft being a light sport aircraft, we were unable to glide the aircraft toward the runway. Wasim suddenly took the controls from me, saying because he was a CFI he felt more qualified to handle the situation, even though I felt perfectly capable of doing so myself. Still, I announced to him that you have the controls and he acknowledged by saying, "I have the controls." Wasim continued heading toward the airport which was only about 3 miles away. I told him we will not make it due to the headwinds being so strong, causing the plane to quickly lose altitude. Instead we should find a clearing to safely land the plane. Because he was the PIC at that time I looked around for a place to land. To my left, there was

an empty road and I guided him towards it because if he continued heading where he was, there were trees and houses which would have made it a lot more unsafe. I told him that I am deploying the parachute and right as I said that Wasim went ahead and deployed the parachute. Once the parachute was deployed the plane slowed down which resulted in no injuries to both of the pilots. Thankfully since we landed in a clearing and did proper planning before the impact, there was also no damage to anyone or any property. Visually, we could see that the front landing gear and propeller of the plane were damaged. Once the plane was on the ground, I exited the plane because of the possibility of the plane catching fire, while Wasim continued to gather his things before exiting as well. I was inspecting myself for any injuries as the police showed up and questioned us about what happened.

This accident has allowed me to gain a much better understanding of being a safer pilot and always sticking to proper flight planning before the flight, including all calculations such as fuel consumption and making sure both pilots agree about the flight plan prior to take off. Wasim and I are both commercial pilot license holders and Wasim is a CFI which makes us both experienced enough to handle the flight together. I should have acted upon my hesitation and clarified with someone at Mesa about any concerns that I may have had in regards to fuel consumption. I also should have contacted maintenance for any issues that I felt the plane may have been having. It is also necessary to prepare for any unforeseen weather and circumstances. Regardless of whether there is enough fuel to reach a certain airport, we should still account for all situations that may require the plane to fly for a longer time. Winds were suitable before flying but they became stronger causing the fuel to burn a lot quicker closer to our destination, including our 30 minutes of reserve fuel which resulted in the calculation of fuel consumption being inaccurate. I have learned from my mistakes and know that moving forward this accident will allow me to become a much better and safer pilot. I will create a flight plan that is per the company and FAA rules and be aware of the weather situation and be best prepared for any unforeseen situations. I will also calculate fuel consumption with these situations in mind and make sure the fuel is full before leaving for any destination. Because even though according to the calculations there was enough fuel in the plane to reach our destination, the winds became unpredictable and could likely have been the cause for excessive fuel being consumed resulting in engine failure.

Below is a table showing my calculations of the distance and fuel consumption:

<u>Legs</u>	<u>Departure</u>	<u>Destination</u>	<u>Distance</u>	<u>Time flown</u>	<u>Altitude</u>	<u>Total fuel</u>	<u>Fuel consumed</u>	<u>Fuel remaining</u>	<u>refuel</u>
1	KINF	KTCL	380 Nm	3.4	4500 ft	26.1 gal	12.24 gal	13.86 gal	
2	KTCL	08A	77 Nm	50 min	3000 ft - 5000 ft	7.86 gal	4 gal	3.86 gal	+5 gal
3	08A	2J9	147 Nm	1.3	3000 ft	8.86 gal	5.2 gal	3.66 gal	+4 gal
4	2J9	KCTY	95 Nm	1.0 calculated but due to headwind 1.5 flown	3000 ft	7.66 gal			

According to the pilot operating handbook for this aircraft, the fuel consumption was calculated as **3.5 gallons per hour going from KINF to KTCL**. less power more tailwinds more groundspeed at 4600 RPMs. From **KTCL-08A-29J-KCTY** the fuel consumption was calculated at **4 gallons per hour** at 4800-4900 RPMs because of 8-10 knots of headwind. I have attached a reference to the table provided in the POH on the page below.

max wing loading 57.83 kg/m² 11.83 lb/ft²

** Baggage is permitted only when the baggage compartment is installed

Performance		
Top speed	120 KCAS (SL)	
Stall speed - full flaps (+2)	42 KIAS	
Stall speed - clean (0)	49 KIAS	
Best climb speed	76 KIAS	
Fuel		
Total fuel capacity (in 2 tanks)	100 L	26.4 US gal
Total unusable fuel	1 L	0.26 USgal

5.8. CRUISING - POWER SETTING, FUEL CONSUMPTION

Conditions

Weight: MTOM (1212 lbs / 550 kg)
Temperature: ISA
Wind: zero
Flaps: (0) or (-)
Altitude: 4000 ft

Reference cruise parameters:

RPM	KIAS	FF [US gal] / [liter/h]
5500	105	4.5 / 17.0
5000	95	4.0 / 15.0

NOTE: For better fuel consumption estimation at various cruising regimes consult the Rotax 912 Operators manual.

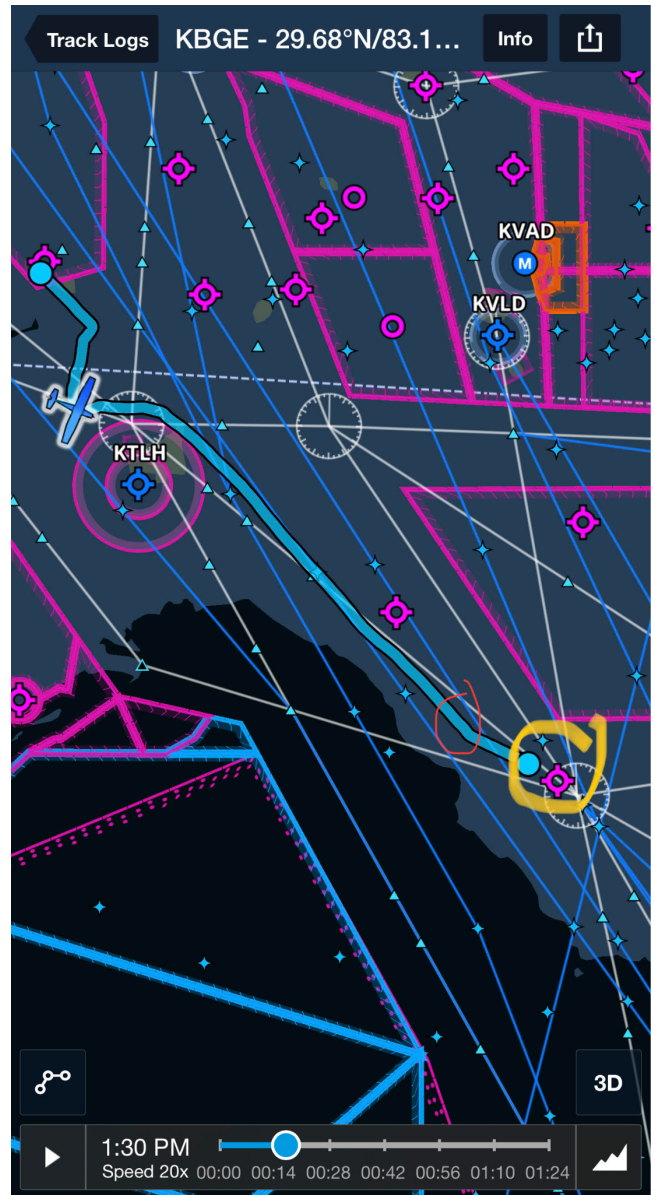
1.6. SYSTEMS

1.6.1. POWERPLANT

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In the picture on the right, the red circle indicates the moment in which we experienced engine failure. And the yellow circle shows the place of impact, which is only 3 miles short of the Cross City airport.