

Monthly Newsletter of the Kitchener-Waterloo RAA

- November 2018 -



At the October meeting, Ed Welfred described his progress to date on the Bearhawk Patrol he is building and showed us a number of photos that he has taken to document the construction process. The Bearhawk Patrol has slow speed performance like a Super Cub, but cruise speed of a Cessna 172 making it a great all-purpose aircraft.

President's Message

Well it seems that winter may be making an early appearance! Several weeks of below normal temperatures, wind and rain have made this fall a little challenging for anyone wanting to get a little flight time in their light aircraft. I was lucky enough to get a couple of hours in, but a nasty vibration on start-up caused me to rethink flying last weekend. After a little troubleshooting I was able to find the problem, but I'm waiting for parts now. There's a bit of a story behind this and I have included it in this issue. If you fly behind a Rotax 4stroke that was manufactured between 2012 and 2014, reading this issue is a must!

November is election month at KWRAA!!!

Several positions are vacant and all are up for grabs if you feel so inclined! Please volunteer to help run this organization. It's not a big time commitment, but it does have its rewards. Due to a number of unforeseen circumstances, the November meeting has been rescheduled to November 19. Wayne Haddath will be our guest speaker, talking about air racing. The previously scheduled guest from Sound Insurance Agency has been moved to the January 14 meeting. Remember that there is no KWRAA meeting in December.

There are a number of other announcements and chapter information in this issue so please check it out.

Contact a member of the executive to reserve your KWRAA Christmas Party tickets before they are gone!

2019 is going to be a great year for KWRAA. - Dan

Whole Lotta Shankin' Goin' On...

October 30th turned out to be a pretty good day for flying. We were finally getting a little break from the messy fall conditions we had been enduring for the last couple of weeks. A quick message to Lee and we decided to try flying up to either Wiarton or Owen Sound for a late lunch.

As it turned out, Lee was already in the air and giving someone a ride at Pike Lake when I got to the Mount Forest area, so I circled the lake a couple of times and flew over past Mike Thorp's place as I waited for Lee to finish up the short sightseeing flight. As I slowed up the engine to descend closer to the lake, I noticed a slight vibration and hesitation in the engine. I returned to full throttle and climbed out. By this time, Lee had dropped off his passenger and was now off the water, ready to head to CYOS.

The vibration had stopped and everything seemed normal again, so we made our way toward Owen Sound for lunch. We decided to do a fly-past over Williams Lake and Glendale Aerodrome to say hello to Tim and Susan by waving our aircraft wings. As we approached the lake, we noticed an aircraft in the Chatsworth area on the ADS-B displays. We made radio contact and once again mused about the advantages of having TIS-B in the cockpit. As we flew over, we noticed Tim standing on the strip and ended up making it a full stop landing with Lee landing on the lake and me using the gravel (old asphalt) strip.



Tim and Susan own the old Glendale Aerodrome just south of Chatsworth. Lee and I try to drop in on them from time to time to say hello and visit when we can. Susan's dad was a pilot and originally opened the Aerodrome, which was quite popular back in the 1960's and 70's. The strip is a little worse for wear now but still quite acceptable for virtually any small aircraft.



After a quick "hello", we let them know that we were on our way to CYOS for lunch and would drop back in on the way home. They were quite welcoming as usual and welcomed our return visit.



I would like to say the trip into Owen Sound airport was uneventful, but once again we were reminded of the benefits of having ADS-B and the drawbacks of relying strictly on "see and be seen".

Kitchener-Waterloo RAA Page 2 of 6

The approach to CYOS was going to be an approach from the south west, crossing over the field to join the mid-left downwind for 18. Simple enough... until the plane leaving the circuit announces he will be departing from 36 and doing a right turn-out, but then turns left and climbs to circuit height crossing over the field as if he's just joining the circuit like we were. Obviously, for more than just a few seconds he was flying straight towards me, but in the opposite direction!!! Fortunately, I watched him like a hawk after he made his first turn and then as he flew straight toward us before crossing the field and departing to the north-east.

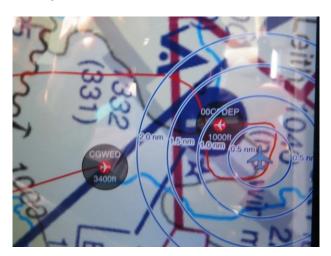
The concept of "see and be seen" also often relies on the augmentation of data through radio position and intention reports, but this only works if you actually do what you say you are going to do!!! This was another time where ADS-B would have allowed us to track his position and Lee could have witnessed what was unfolding about a kilometer in front of me as this pilot turned to cross mid-field after departing the opposite direction from the active runway. I know some of you are thinking that it's his prerogative to do what he wants since the aerodrome is uncontrolled, but at least he could have followed through with his announced intentions, which would have kept him well clear of us and anyone else in the circuit.

Our ADS-B systems revealed a number of other aircraft in the area who also had the foresight to install ADS-B out in their aircraft.

In this picture you can see Lee's Searey displayed as a blue icon and my Highlander as I touched down on runway 18. It also shows another aircraft at 3400 ft., which gives us the indication that he is just overflying the field on his way to someplace east of Owen Sound. Even without the visual or verbal confirmation, we already know that there will be no conflict according to the ADS-B TIS-B display.

What the display did not show was the Cessna 172 approaching from the west inbound for a full stop landing at CYOS. Thankfully, this pilot understood the importance of announcing his intentions and following through as stated. Although his transmission was a small distraction as I determined relative position in 3D from me and the airport, it was all part of the same confusing moment when the other aircraft was messing up. Again, I believe that if we all have ADS-B In and ADS-B Out, the picture becomes much clearer... literally!

Our one mile separation from each other on approach to CYOS gave Lee the opportunity to snap a couple of photos as I was dealing with the departing aircraft. It's not all serious business flying and occasionally something like this captures your attention for a few seconds. It's amazing the talent and artistry some people exhibit often in the most unusual and interesting ways. This corn maze of sorts was titled "Unusual Shadow" by Lee when I received it from him. The corn harvest has already started and this picture likely would not exist the next day as one quarter of it has already been 'erased' by the harvester.





Kitchener-Waterloo RAA *Page 3 of 6*

Lunch was good albeit a little late that day, but we enjoyed the meal and prepared to depart back to Williams Lake/ Glendale Aerodrome. When I started the Rotax 912 in the Highlander, I was literally shaken by a strong vibration as it tried to idle. I immediately shut down the engine and pulled the cowls to inspect the plane. The cables and throttle positions looked normal, the choke cables, which had been the culprit in the past, also looked fine. Wait... do I smell gas? There had been fuel expelled from the atmospheric compensation tube on the starboard Bing carburetor (vent tube). Typically this can only happen when the float in the carb doesn't shut off the flow of fuel into the carb allowing the fuel to overfill the carb bowl and spill out the vent tube. I removed the bowl to check for foreign matter and try to determine the problem. The float bowl was definitely over-full and spilled out fuel as I removed it. I pumped the valve up and down a few times to ensure that it was not the culprit and fully shut off the fuel when it was lifted into the off position.

Hoping this would solve the problem, I reinstalled the bowl and test ran the engine. All seemed okay now and after turning the fuel valve back on, we departed the airport and headed to visit Tim and Susan. Lee had moved his plane to Roger Deming's airstrip after the closure of CPR3 and I wanted to see the new hangars that Roger built at his place so I followed Lee back to Damascus. We landed at Roger's place and the plane appeared to still be okay.



Lee showed me around his new digs there and I headed for home after helping him free the Searey from the muddy gravel in front of the hangar. One of the sponsons had hung up just beyond a row of gravel that Roger was in the process of spreading around in front of the new hangars.

The plane appeared to be okay now and ran fine and even seemed okay all the way back to Guelph airpark after our day of flying. As I reduced power to join the circuit at Guelph, I noticed a vibration again. I went back to full power for a few seconds and it disappeared. As I reduced power, it started to vibrate again and I began to notice the smell of gasoline again. I joined overhead and shortened the approach to a tight circuit, landing without incident, but as I idled back to the hangar the vibration continued.

Once at the hangar, I pulled the cowlings off and sure enough the problem of fuel coming out the overflow tube was back. I pulled the bowl and checked everything I could think of that may have caused the problem. It was getting late in the day and darkness was approaching, so this issue would have to be solved another day.

The next day, after researching the problem a little, I figured that the replacement floats I had installed as part of a recall early in 2015 may not be as buoyant as they were supposed to be. At that time, Rotax had issued a Mandatory Service Bulletin advising that the carburetor floats manufactured in 2012 through 2014 were defective and had to be replaced, which I did as soon as the replacement parts became available. As it turns out, the replacement floats also had potential defects and Rotax was working on a solution. Unfortunately, I didn't know about this part of the equation until now. I pulled the bowls off of both carbs and checked the fuel level in the howls and sure

checked the fuel level in the bowls and sure enough only the starboard side was overflowing. I then set them side by side on the floor of the hangar and checked the position of each of the floats. Sure enough, the starboard carb floats were sitting much lower almost to the point of being submerged in the fuel. It was now obvious why the fuel was overflowing and one carb was flooding the engine on one side.

I brought the floats and bowls home so I could weigh the floats according to the service bulletin procedure. As it turns out, one set had absorbed enough fuel to weigh 13 grams instead of the specified 7 grams or less. During my last check of the floats a couple of months ago, they were both 7 grams. The service bulleting requires mandatory checks every 25 hours.

I advised George Wood at Rotech Motors Ltd. in Vernon of my plight and ordered two new sets of floats. Hopefully they will be covered under warranty but regardless, I can't fly without them and anxiously await their arrival! I informed Cam and David Wood of the situation since I know their Zenair Ch750 has a Rotax 912 of the same vintage as mine.

If there are others of you out there that have a Rotax 912 manufactured between 2012 and 2014 inclusive, please check the floats to ensure you don't have the same problem developing! Left unchecked, it could lead to rough running, unnecessary engine wear, and possibly even an engine fire!

Floats should be checked per Rotax Service Bulletin, but this gives a quick visual indication that something is likely wrong with the bouyancy of the floats.

This float set weighed in at 13g. The side pins float well below the level of the fuel in the bowl.

This float set weighed in at 7g. The side pins float at, or above, the level of the fuel in the bowl.

A visual inspection of the floats sitting in fuel side by side makes it pretty obvious that the ones on the left are not as buoyant as the ones on the right. You can see it by looking at the submerged side pins or even by looking at the amount of guide pin showing through the top of the floats.

Update:

Just before posting this to the KWRAA website, the floats arrived, so I will be installing them later this week and I will update you as this situation develops.

Kitchener-Waterloo RAA Page 5 of 6

KWRAA Christmas Party	Time: Doors open at 6:30, Dinner at 7:00
Over half of the tickets are sold already!	Place: Old Heidelberg Restaurant and Tavern
Call Mac ASAP to reserve tickets and you can	Ticket: \$30 per person
pick them up at the November 19 th meeting!	Contact: Mac McCulloch
Date: November 30, 2018	Don't miss out!!!
November Meeting Reminder	We have Wayne Haddath coming to the next meeting to talk about air racing in his amateur- built F1 Rocket!
November Meeting Reminder	Consider an executive position and help shape
November is election month at KWRAA!!!	the chapter. The time commitment is minimal,
Several positions are vacant and all are up for	but the rewards are existential and tangible.
grabs if you feel so inclined!	At very least nominate someone else ;)

Upcoming Events in 2018: (Highlighted lines are KWRAA Events*)November 19-November Meeting at 7:30 in the Cadet building at CYKFNovember 30-KWRAA Christmas Party

Executive Contact Information:

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Director:	Open	(Looking for a Volunteer)
Director:	Mac McCulloch	(519) 831-0967 macpat@live.ca
RAA Canada:	Gary Wolf	(519) 648-3030 garywolf@rogers.com

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Kitchener-Waterloo RAA *Page 6 of 6*