



Newsletter Vol. 3, No. 2. Summer / Fall 2010

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#### **Aircraft Owner's Toolbox, Part 2, Pre-flight**

In the previous article in this series, we discussed documentation. One group of items that was not included in that discussion was the aircraft paperwork file, or log books, for short, although there are a couple of other pieces of paper that comprise the paperwork file. They are just kept on board the aircraft as a requirement for some silly reason.

Did an eyebrow raise on that last statement? I hope so! There is a purpose for everything!

- **Airworthiness certificate:** Defines the requirements for airworthiness as well as the category the aircraft is certified in.
- **Registration:** Federally issued document that gives the aircraft owner registration. Required to be on board (and current) for operation.
- **Operating limitations:** Describes the type of operations the aircraft is authorized for, as well as limitations such as airspeeds, maximum power settings, etc. This may be in the form of placards, a pilot operating handbook (POH), or a combination of those items.
- **Weight and balance:** General description of aircraft by empty weight and center of gravity to use as a basis for calculating your as-loaded aircraft to fly safely in the design envelope. Quite often this is attached to or included in the POH.
- And depending on type of operation, a **Radio Station License** may be required.

Sure, you remember those items now, from your pilot training, as A-R-R-O-W.

OK, we have started our pre-flight inspection by confirming all of the above items are current and on board the aircraft, either properly displayed or available to the pilot. (As a short aside, available to the pilot means the POH is in a place the pilot can access in flight. Yes, during maintenance we have found

them in wing lockers, nose or aft baggage...). Next, what is the status of our IFR (altimeter / static / transponder) or VFR (transponder) checks? In date means tested and signed off within the last 24-calendar months. Annual Inspection within the last 12 calendar months. VOR check within the last 30 days. ELT battery due date varies with type of ELT and battery. Any airworthiness directives I need to have checked? (These do not always coincide with, or are effective at Annual Inspection time.) When is the oil change due? Grab your log books and check these items out. I do know some aircraft owners that install a placard noting these items on the instrument panel, or have a white board in the hangar with these listed; that is a good idea!

Now grab your POH (or other 'road map') that you use for your preflight inspection. The procedures will be similar for all aircraft, with differences due to specific aircraft configuration. Reading through the procedure, there are access points needing to be opened for this preflight. These are inclusive to the engine cowl doors and fuel strainer door. For most Bonanzas, these can be 2 different size slot screwdrivers, although (again) there may be some variation. Don't forget to also have a shop towel, a dipstick or other means of visually verifying fuel level, a Phillips screwdriver, and a flashlight.

The word "check" is used often in the preflight procedure. The first few flights we took at the beginning, our instructors showed us the preflight procedure. Also, as we progressed to different aircraft, the instructor pilot that checked us out showed us what the specific areas of concern were on the new aircraft. All of these are things to check; for security, condition, contamination, quantity, etc..

I propose this to you: Look for 'out of the ordinary'. After several hundred, maybe thousands of preflight inspections, perhaps you are going through the motions and not really examining the condition anymore. It may be time to change your pattern and push your own envelope by looking for out of the ordinary, or what is not there.

Part of the walk-around calls for checking the flight controls. OK, they look like they are still there, on to the next item... No? OK, look at the hinges or bearings, what do you see? Nothing because it's dirty or rusty? Time to clean and make sure it's properly lubed. Looks nice and clean because the aircraft just came back from the paint shop? Definitely time to confirm it is properly lubed. Does the surface travel stop - to - stop? 'Most' aircraft have physical stops at the control actuator so you should be able to feel that. If there are rod end bearings involved, how are they for cleanliness and lubrication? Many aircraft these are not easily accessible; so if your maintenance provider has done their job, life should be OK. And check the surface for condition of the skin: cracks, wrinkles, loose / missing rivets, loose / missing paint, etc. Missing paint?!? Yup, can affect balance of the surface.

So what have we accomplished here. Quite a bit of stuff that the manufacturers distill into 'check'. If we just look and see, we have not felt, or moved, so we have not looked past the ordinary. Be Curious! I encourage you to expand on the word 'check' as applied to the rest of your preflight sections; then as you perform this pre-flight, you may find that you need another tool or multiple to be able to perform what is needed for your aircraft.

Remember, safety is the ultimate goal of this life. There is nothing wrong with a preflight taking 10 minutes or more to perform. Reminds me of an operator I worked for about 25 years ago. One older pilot was so meticulous on his pre-flight inspection, the boss used to joke about handing him the log books so he could sign off the annual inspection. I suppose that's how he became one. Older pilot, that is!  
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What does the aircraft owner want for Christmas? At AVSTAR, your co-pilot can buy you a gift certificate! That's a great way to get that new accessory. Available in any denomination, call 253-770-9964, and Janice or Mike can assist you with the details!



I encourage you to complete your preflight, taking notes if there is anything you need to come back to, instead of interrupting the inspection. You may miss a portion of the inspection if you forget to come back to the correct spot. And, please resist that 'it will make one more flight' feeling. For example, a 5 PSI drop in tire pressure will affect that take-off roll. Extra drag. Remember that warning about wet grass your instructor gave you? Same effect. Safety first! Next time, we'll discuss the tools needed for the actual flight and the post flight inspection.

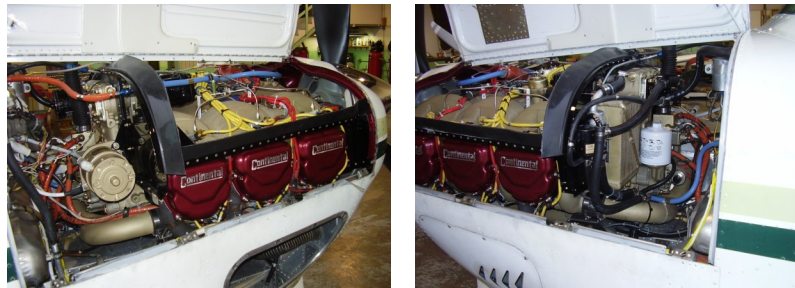
## Customer Spotlight

A run-out engine should be looked at as an opportunity. About 11 years ago, Stan and Debby of Odessa, WA, put a factory reman IO-470 in their J35. Active flyers, some 1870 hours later, this year it was time for another engine change. Having had good luck with the reman route before (other than normal maintenance: one cylinder change), the factory reman was again the choice, but this time, the *displacement was up for negotiation...*

So, out with the old



And in with the new!



Initial data suggest a speed increase in the 15 range, with total trip fuel burn close to the same as before. I have no doubt that after getting used to power settings with this new 550, Stan will get the numbers looking where they should be. By the way, Stan took advantage of the D'Shannon Aviation baffle kit special last Spring, the speed increase mentioned above is with the gap seals still on the shelf. He'll be back in a few weeks for those, so stay tuned for the full report!

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Change is the only constant. At AVSTAR, we have kept our shop rate the same over the past few years, but we will be needing to make a small change the first of the year. Part of the change will be rephrasing the cash / check discount we offer. We are working on a couple of different plans right now; trying to minimize the impact it will have on you, and yet be able to cover our continually rising costs.

*Thank you for your continued support!*

Tidbits:

**The scheduled airport closure and rebuilding** of the runway at PLU this summer was postponed, apparently due to a funding conflict at the FAA. For whatever reason, there have been many sighs of relief that business was not be affected due to that postponement. It has been a tough year out here this year, maybe the economy will improve enough we won't feel the pain of such a closure if / when the FAA funding becomes available. From what I have been able to gather, I am not the only businessman at this airport that feels this way.

**Another election season** has finally come and gone. What remains to be seen is the impact of our 'new' elected officials. If they are returning, was the promised change merely lip service we received during the campaigns? If they are new to the office, will there be substantive change or will they fold into the mold? Here in Washington, there were several initiatives and other measures that, by the nature of their authors, were in conflict with one-another, to say the least of how they matched-up with the State constitution. One thing we can be certain of, the elected officials will be pursuing 'revenue enhancements' on a scale grander than last year. I encourage all of you, whether in Washington State or elsewhere, to find your representative's contact information and tell them your agenda before the first of the year—they are already writing theirs, I assure you.

**The customers we have** here at AVSTAR are simply the greatest collective group of people on earth! Without you, we have nothing to be thankful for. With you, we continue to prosper, and can help other folks along the way. We thank you for the kind words you tell others about us, and we look forward to serving you in the coming years. In the mean while, enjoy the life, skills, and fortune that God gave you and have a Merry Christmas this year.

Thank you for reading this issue of our newsletter. I hope you have found it interesting and informative. If you have any questions or comments, you can email them to me at [avstarair@att.net](mailto:avstarair@att.net). If this issue was sent to you by a friend, you may opt in to receive further issues by sending an email to me at [avstarair@att.net](mailto:avstarair@att.net). If you chose to opt-out of receiving further issues, please email me at [avstarair@att.net](mailto:avstarair@att.net) with the word remove in the subject line.

Gear Green,

*Mike*

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