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Some Things To Check Following Your Annual Aircraft Inspection & Routine Maintenance

by Chuck Swain

When we take our planes into the shop for an annual inspection and routine maintenance, any reputable aircraft technician thoroughly goes through every nook and cranny checking everything. Inspection plates are removed, controls are inspected, adjusted and lubricated.... the battery and ELT is checked and oftentimes removed from the aircraft for replacement or maintenance... the oil is changed and the cylinders are checked for compression.... the electrical system and lights are checked.... all of the surfaces of the aircraft are checked for damage... and there is a thorough review of Airworthiness Directives to ensure compliance, and much, much more.

If you have the time and interest, and if allowed by your aircraft technician, you might even take the day off from your regular job and participate in an "owner-assist" inspection. I highly encourage this – as does the FAA – so you might learn more about your aircraft, and help with some of the menial tasks which saves your technician time, and you money!

But have you ever thought of doing a thorough preflight inspection following your annual inspection? You might not think it is necessary because you have trust in your aircraft inspector, but besides being required by the FAA, it is definitely a good idea.

During an annual inspection, so much of the aircraft is either "opened up," as in the case of inspection plates, carpeting, covers and various components which are removed. In other words, a lot of parts are disturbed during the process out of necessity.

Now with a conscientious aircraft inspector, everything will hopefully be put back together the way it was, or improved in most instances, and the aircraft will be ready to go. But if your technician is like most GA technicians, he/she works on an endless array of different types of aircraft, gets interrupted during the day while working like anyone else in any profession, including medical surgeons, and is watching the clock to make sure he/she gets all of his/her scheduled work completed in time to prepare for the next day, and to provide you with a cost-effective service without wasting your valuable time and money. An aircraft maintenance technician is also only human and subject to the same human errors that pilots are subjected to. He/she could make a mistake that could have a profound effect on your life, and the lives of your passengers. In other words, it is better to be safe than sorry!

Here are a few things to check before taking off following your annual inspection or other routine maintenance:

1) Conduct a thorough preflight inspection using your aircraft written checklist. Your written checklist will ensure that you do not forget any essential items. Save your memory for an emergency.

2) Make sure that any tow bars used to move your aircraft have been removed.

3) Look for any inspection covers that may not have been securely fas-

tened, or are missing screws.

4) Check your oil dipstick to make sure oil has been added following the oil change, and check for possible leaks around the oil filter. If your aircraft technician has not yet completed a run-up following the oil change to check for leaks, be sure you do prior to leaving the ramp.

5) Inspect any aircraft components that may have been replaced, such as wheel pants, and tires to ensure proper inflation, and that the bolts and screws are securely fastened.

6) Be sure your ELT switch is in the "armed" position, and listen on 121.5 Mhz on your aircraft radio to ensure that the ELT has not accidentally gone off during maintenance.

7) Be sure to take a fuel sample to check for water and contaminants.

8) Immediately after engine start-up, check for proper oil pressure and engine operating temperature.

9) Prior to takeoff, conduct a complete engine run-up and again, check for proper oil pressure and engine operating temperature. If you suspect anything out of the ordinary, taxi back and monitor the gauges, unless, of course, there is a huge problem, then shut down the engine and call for a tow.

10) Also prior to takeoff, make sure that both aileron and rudder trims are in their neutral or takeoff positions, conduct a complete flap operating check, and check to make sure all control surfaces feel well connected, secure and have free movement. Look at the controls as you move them to make sure they operate in the correct direction. Make sure that all doors and windows are closed and latched (including the baggage component prior to entering the aircraft), and complete all other items on the prior-to-takeoff checklist making doubly sure that the fuel valve is where you want it to be and that the radio frequencies haven't been changed. Make sure that everything in the cockpit is where it was when you brought the aircraft in. Headsets, flashlights, charts, fire bottles, etc., and by the way, make sure you have changed the batteries in your flashlight, as this too is the pilot's responsibility.

11) On the takeoff roll, watch for any peculiarities in handling characteristics, or unusual sounds, smells and instrument readings.

12) Stay in the pattern for a few minutes to ensure that all systems are operating properly. You may even wish to practice a couple of touch and goes to give you and your aircraft plenty of time to fly within a safe operating environment in the event of a mechanical problem.

Remember, the ultimate responsibility for the condition and upkeep of aircraft is that of the owner and pilot, so be sure to always conduct a thorough "post inspection" after leaving your favorite maintenance facility, and prior to takeoff.

We welcome your feedback on this article, and suggestions for future topics. Email dave@midwestflyer.com. Thank you! ❑

EDITOR'S NOTE: Chuck Swain has been an aircraft maintenance technician for nearly four decades, and has successfully operated Beaver Aviation, Inc. at Dodge County Airport, Juneau, Wis., for most of his career. Swain is a past president of the Wisconsin Aviation Trades Association, and a past board member. He has represented the aviation industry on various state aviation committees and advisory councils.

Ask Pete!

by Pete Schoeninger

Email your questions to hpfarm@centurytel.net

Pete Schoeninger

Have a question about operating your aircraft in a safe and efficient manner, buying or selling a plane, or aircraft ownership? Then "Ask Pete," Pete Schoeninger.

Q: For years I have resisted buying an engine heater as I rarely fly in the winter. Now, I will be flying more in the winter. Do you really think I should get a preheater...and do you have any tips on how to use one?

A: Yes, get one, and get a good one. Unless the heater manufacturer recommends differently, I would recommend NOT leaving the heater on continuously for weeks at a time (some heaters can make some condensation.) Also make unplugging the engine heater one of the last things you do before your preflight and launch, instead of one of the first. I have seen owners unplug their heater, then spend 45 minutes preparing for a flight, and then have an ice cold engine to start. Remember, the engine is designed to dissipate heat, not retain it! ❑