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WRAP UP FOR WINTER

There's no getting away from it, winter is well and truly on its way. Amjad Shahabuddin has some great tips to make sure your aircraft doesn't suffer whilst it's out in the cold

SUMMER, let's face it, has been and gone, and winter will be here soon. It's time for people to start to consider what to do to lay up their aircraft over winter.

The best solution, at the risk of stating the obvious, is to hangar your aircraft where it can be protected from the elements and kept in a reasonably stable temperature environment. However, even here, some precautions should be taken.

Many people seem to fly their aircraft during the summer, store it over winter and then consider having the annual and routine maintenance carried out in the spring, so that the aircraft is in perfect working order for the new season.

This is fine to a certain extent, but I would suggest that if you do no other maintenance in the autumn, then you should do just one thing, remove the old oil from your engine and refill with the appropriate grade.

The problem of leaving the old oil in the engine is that used oil can be quite acidic which, when combined with water from the atmosphere, causes corrosion. This can lead to pitting of components like cam lobes, bearings etc. if left in the engine over a period of time.

This problem is then compounded when the rust particles that are formed get into the oil and act like a grinding paste when the engine is next started, causing further wear and damage. This all leads to increased maintenance bills and reduced reliability, all for the cost of an oil change.

The old oil, once drained, can be replaced by your normal grade if you intend to carry on flying for a minimum of half an hour cruise every fortnight. If however, like many, you fly less than this over the winter then you have two choices.

There are oils, such as Shell's W 15W/50, with corrosion inhibitor and anti-wear additives which are ideally suited for pilots who intend to fly through the winter, but do not manage to fly every two weeks. Alternatively, a mixture of one part of Shell's Fluid 2XN to three parts of oil can be used as an inhibiting oil if the aircraft is to be stored for the winter period.

Things that you should consider doing even if the aircraft is hangared are:

CHANGE THE OIL For exactly the reasons as stated above. It's a quick job and could save you in the long run.

CHOCK THE WHEELS Front and back and release the parking brake. This will prevent the brake seizing on, whilst keeping the aircraft static.

BLANK THE INLETS, EXHAUST AND VENTS Pitot and static vent covers are essential to ensure that the orifices do not become blocked with insects or dirt. The last thing you need on your first familiarisation flight of the spring is to find that your ASI or altimeter is inoperative. Furthermore, blanking engine intakes and exhausts will significantly reduce the amount of moisture able to get into your engine which can cause the onset of that dreaded corrosion.

APPLY A CANOPY COVER Or at least tie a dust sheet over the cockpit area. Not only does sunlight effect perspex, but bird droppings can be quite corrosive and etch the surface if not removed for a period of time.

APPLY AIRFRAME GREASE Whilst doing your storage checks it is prudent to re-lubricate hinges and linkages as you go around. Most light aircraft use AeroShell Grease 6 as a general purpose airframe grease, but check with your maintenance engineer.

Check that the fuel cocks are closed and master switches off. Why not also consider removing the battery to prevent any leakage current from draining it?

FILL THE FUEL TANKS Ensuring that the fuel tanks are full prevents the build up of condensation in the tanks over winter. This condensation is inevitable if air is present in the tank and will in turn lead to the build up of water in the bottom of the tank. This will again mean corrosion and potentially expensive tank repairs. This is particularly important if your aircraft is stored outside. However you must ensure that, if your aircraft is hangared, you have permission to store your aircraft with full tanks – some airfield managers consider it to be a potential fire hazard and frown on such practice.



Make hay while the sun shines. If you're storing your aircraft during the winter months, you can save a lot of hassle by doing things beforehand.

If your aircraft is metal-skinned and your only option is to store it outside the above suggestions still apply, but you should also consider the following:

PICKET YOUR AIRCRAFT DOWN Ideally find a sheltered spot where the aircraft is not exposed to too much wind. The aircraft should be secured, using the correct tie down points, nose into the prevailing wind direction for that site. The tie down points should be secured to concrete blocks, screws, spikes or ideally dedicated hard points set into the ground. Ensure that the straps used are not too tight as they may alter in length in dry or damp conditions.

APPLY CONTROL LOCKS Use either external flying control surface locks or internal control

braces to prevent the control surfaces from damaging themselves by crashing from one lock stop to the other whilst unattended.

No matter what you have added (control locks, engine blanks, pitot covers), or removed (battery), it is always good practice to placard the cockpit to remind you or others of the condition of the aircraft. In this way when spring does finally come, the pre-flight walk round will be easier and you will take to the air with the peace of mind that you have done all you can for your aircraft.

ABOUT THE AUTHOR: Amjad Shahabuddin is the Global Marketing Manager for Aviation Lubricants at Shell where he has worked since 1996. Amjad leads marketing strategy development, portfolio management, pricing and promotions on behalf of AeroShell Lubricants and works with regional teams worldwide to implement AeroShell campaigns at the local level.



If you plan to have your annual inspection after the winter, you can still save money by following Amjad's tips on this page.