



May 2020

Aircraft Maintenance during the COVID-19 shut down

For the majority of the Australian hot air balloon fleet, this is the first extended period of non flying that most aircraft and operators will have seen. For private pilots this also extends the normal summer hiatus from flying by many months.

So what should we be doing with that time on the ground? How do we store and protect our equipment and how do we get ready to start flying again?

Flying your aircraft is best

It is our opinion that the best option for all owners and operators is to return to flying as soon as it is legal and safe to do so. Long term storage of your aircraft does present risks if it is not done correctly.

Historically it can be shown that best life is achieved for any balloon envelope if it is flown regularly and packed away dry. The regular airing and heating of the fabric reduces the chance of biological attack from mould or mildew on the fabric and load tapes.

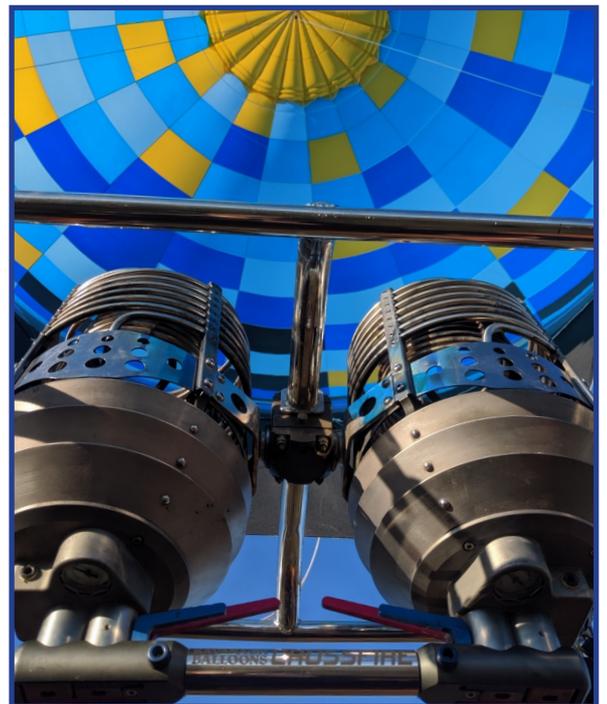
Regular flight will also prevent rodents or insects from establishing nests or homes in any of your equipment.

If flying is still not possible then hot inflations and inspections on dry ground before long term storage is recommended. A cold inflation and inspection is the least favourable option but is better than none.

From a maintenance perspective, we would consider flying, drying, airing and inspection as essential activities to ensure airworthiness of your aircraft.

This is not a time for DIY

Ensure that you are appropriately qualified to perform any maintenance on your aircraft as you would at any other time. Most of what we are suggesting here can be performed by pilots and owners but if you are looking beyond basic cleaning and preparation for storage then remember to consult with a qualified maintainer.



Cleaning

This downtime of course can be used for cleaning and routine maintenance.

Consider removing all tanks from your basket and giving the basket a really good deep clean. A build up of dirt between the base leather, wicker and floor can cause wear or even dry rot if it is kept moist so get a good quality dust mask and blow it all out.

Removal of dirt grass and leaves from the bottom of the basket is best done with a vacuum cleaner and compressed air. We do not recommend using a high pressure washer as it forces dirt into all the nooks and crannies and turns that dirt into mud that is harder or impossible to remove.

A stiff brush can be used on the cane to remove dirt. A suede brush can be used on suede upholstery to give it some new life. Dubbin or other leather conditioners can be used on the bottom chrome hide to recondition that area.

If you are considering re-varnishing a basket then make sure you consult the maintenance manual for instructions and consider that you may require a re-weigh of your basket after adding a few kilos of varnish to it.

Different manufacturers finish the wicker work in different ways but for all Kavanagh Balloons baskets we recommend a high quality UV resistant varnish sprayed on both the inside and outside of the basket.

Soak your poles

Consider removing your burner poles and giving them a good soaking in clean water. This will help extend their life and may reduce the chances of cracking if they have dried out. 24 to 48 hours in a bath will help.

Make sure if you have multiple baskets you mark them with the basket serial number so they all go back to the right basket.

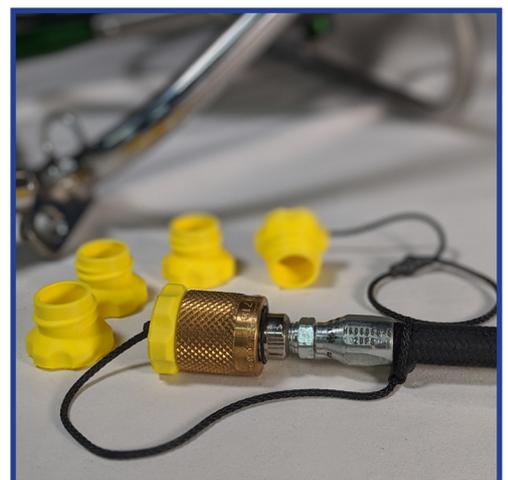
Plugs and caps

Ensure dust caps are fitted to all tank fittings and hoses. Vapour and liquid hoses are best left connected to a tank fitting so nothing can make a home in there.

Pilot light air inlets and flame tubes seem to be a popular home for wasps and other insects so consider wrapping/sealing up burners that will be left in storage for extended periods of time.

Ensure all pressure has been released for burner hoses and between the self seal coupling and the tank valve.

Kavanagh Balloons have tank and hose end dust caps available if you need them.



Polish your burners

Cleaning your burners is best done with a light detergent and soft cloth. Do not use abrasive scourers such as scotchbrite as you will permanently mark the surfaces. Bottle cleaners or kitchen brushes work really well for getting between the coils and other tight spaces.

Stainless steel polishes can be used on cans and coils and stainless steel fuel tanks but you must ensure all residue is removed and avoid contact with hoses. If using a cleaner on anodised valve blocks, consider testing in a discrete area to ensure it does not stain or mark coloured anodising.

Envelope storage

Consider moving your envelope to a pallet or similar to get it off the floor and promote some air circulation under the bag. Remove the envelope bag from your trailer to prevent moisture collecting between the bag and trailer floor.

If you are unsure of how dry the balloon was when last packed away, consider a cold or hot inflation on a dry field to reduce the risk of damage. Consider removing the crown line which can hold a lot of moisture and hanging it to dry totally. Again, mark it with the balloon serial number if you have more than one or tie it to the outside of the envelope bag so it does not get lost or borrowed for other things.

Consider applying a thin coating of machine oil to carabiners to prevent rusting and wrap them in cloth or an old towel so oil can't transfer to the envelope fabric.

Rodents have been known to make homes in stored envelopes so while opening the bag to let moisture escape may be a good idea, consider securely covering with mesh (shade cloth or similar) to keep rodents out.

Other options include the use of dehumidifiers in closed spaces or trailers. In short, moisture and humidity are the enemy with long term storage of envelopes.

Return to service

Before returning to service it will be worth running a check over your equipment so there are no surprises on the launch field.

- Inspect all tank fittings for contamination and the condition of the O ring and gaskets.
- Perform a functional check of the burner system including pilot light function.
- Check your fire extinguisher is in date and not overdue for it's 6 month inspection.
- Check the configuration of your aircraft to make sure that the correct tanks, instruments and burner have been installed after all that cleaning polishing.

Good luck

From the team here at Kavanagh Balloons, we hope everyone gets to return to the skies soon. Our team are here for orders, spares, repairs and technical support. Just give us a call.

