Fire risks in flight

Whilst pilots flying with power will all recognise that their engine and fuel represent a fire risk (both on the ground and in the air), there are other in-flight fire risks that are more generally applicable. As a matter of wider general aviation safety awareness, the FSC would like to bring the following points to the attention of all pilots.

Batteries. Lithium Polymer (Li-Po) and Lithium Ion (Li-Ion) batteries are efficient portable power sources that may be used by pilots to provide power for electric starting systems, strobes and display lighting, etc. Radio-controlled car, drone and model aeroplane enthusiasts who use Li-Po/Li-Ion batteries will be aware of the importance of correct care of these to minimise the fire risk from 'rapid disassembly leading to venting with flame', a state where a damaged battery can generate sufficient heat to cause a fire.

Li-Po/Li-Ion batteries have very specific care instructions for safe use, storage and charging, and should be routinely visually inspected. If you have had a previous heavy landing on your powered hang glider or paraglider that is equipped with a Li-Po/Li-ion battery, you are urged to check the battery for obvious signs of damage.

Even a battery that has not been dropped may 'pillow', a condition where the internal components of the battery break down and swell, causing the external casing to expand. The pillow shape indicates battery failure which may lead to rupture and fire. The battery should not be used but disposed of in accordance with the manufacturer's guidance. A Li-Po/Li-ion that is subjected to a forceful impact may present a significantly greater risk of becoming involved in fire.

Flying with e-cigarettes. The rapid combustion of charging/damaged e-cigarettes has been implicated in deaths and house fires in the UK. If you carry your e-cig in flight you may want to review some of the 'pocket explosions' on YouTube, and then ask yourself how easy it would be to jettison the burning debris whilst airborne. Pilots are strongly recommended not to carry an e-cigarette (or indeed any lit smoking device) in flight.

Daily inspections and pre-flight checks. The importance of checking for wear to fuel tanks has already been notified (see Safety Advisory 011 on the BHPA website). The FSC would like to remind all power pilots of the importance of proper daily inspections and checks to make sure that the entire fuel system is in good condition: hoses are not split, the tank and exhaust is properly secured, caps and spark plugs are properly fixed and the fuel tank filling cap is secure. If you have any doubt about how to perform these checks, a refresher from a suitably qualified instructor or a coach may be one of the most invaluable experiences of your flying career.