



# WHAT IS THE IMPACT OF AEROBATICS ON THE ENVIRONMENT?

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**FACT SHEET #1 - version 1.0**

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# WHAT IS THE IMPACT OF AEROBATICS ON THE ENVIRONMENT?



## FACT #1: THE IMPACT OF AEROBATICS ON THE ENVIRONMENT IS LOW

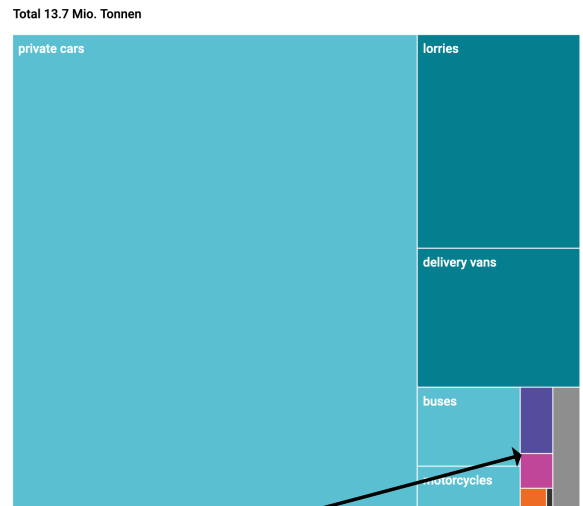
The aircraft used for aerobatics are equipped with extremely reliable and robust engines, whose displacement to power ratio produces little pollution compared to other forms of transport. The fuel used by the light aircraft is AVGAS 100 LL, with an octane rating of 100 and a low lead content (which will soon be replaced by another additive).

The lead contained in AVGAS is necessary because full throttle altitude climbs can lead to "vapor lock" and detonation phenomena that can cause the engine to stop or be destroyed. Moreover, the lead contained in the AVGAS acts as a lubricant (valve seats).

An aerobatic flight is a short activity typically lasting about twenty minutes, which means that its impact on the environment is very limited.

Finally, it is estimated that in Switzerland there are about 4'500 aerobatic flights per year and that the impact of aerobatics on the environment represents about 0.0015% of the CO<sub>2</sub> emissions attributable to transport in the country (FOEN, 2020).

**0.0015%**  
of CO<sub>2</sub> emissions attributable to  
transport in Switzerland



Aerobatics = 1 pixel

Source: FOEN – Swiss emission information system (EMIS)

## FACT #2: THE SMOKE USED IN THE DEMONSTRATIONS IS HARMLESS



The use of smoke in aerobatics is exceptional and represents less than 1% of the flights, mainly during aerial demonstrations or certain competitions. The smoke used in aerobatics is a product tolerated in organic agriculture which generates smoke when sprayed from the exhaust. Aerobatic aircraft in Switzerland use medical white oil (paraffine) as a smoke generator, because its impact on the environment is minimal (the use of diesel is banned by the SAA, despite its 4x lower cost per liter).

Paraffine is also used in the food sector as a coating agent.

## FACT #3: SAA OFFSETS EVERY CARBON EMISSION PRODUCED DURING COMPETITIONS

Since 2008, SAA has been offsetting every carbon emission produced by its competition activities through the MyClimate Foundation. Specifically, the MyClimate organization invests in projects that reduce carbon emissions elsewhere in the world to offset the emissions produced by human activities.



### Sources and additional information:

- Federal Office for the Environment (FOEN): <https://www.bafu.admin.ch/bafu/en/home.html>
- Federal Statistical Office (FSO): <https://www.bfs.admin.ch/bfs/en/home.html>
- MyClimate Foundation: <https://www.myclimate.org>

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