

micronAir®

# Influence of the Cabin Air Filter Age on the Pressure Loss

VIAQ 24-04

May 24<sup>th</sup> 2022

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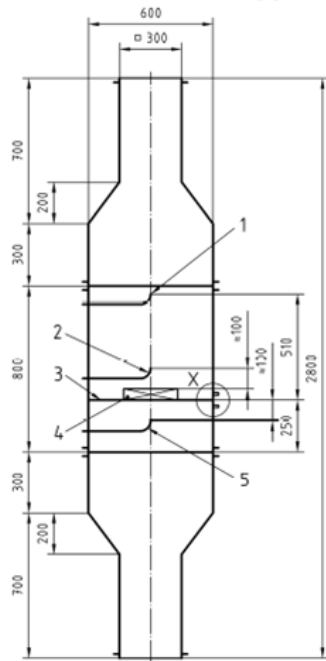
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## Tested filters

- >100 used cabin air filters were random collected in the Heidelberg region of Germany
- Multiple different car models including Audi, BMW, Mercedes-Benz, Renault, Skoda and Volkswagen
- Parts collected in March 2022 with the km mileage value of each single car / filter
- No information on the area / region of driving, but we assume Germany / Europe

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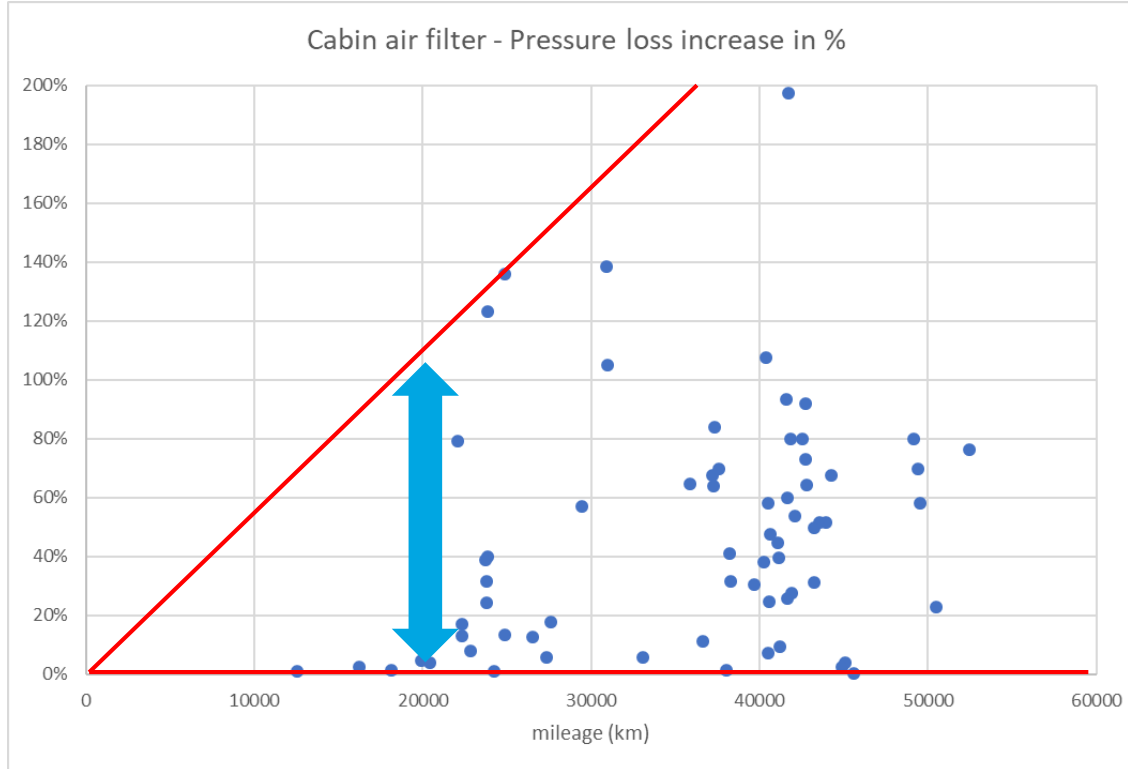
## Test equipment & test procedure



DIN 71460-1 test rig

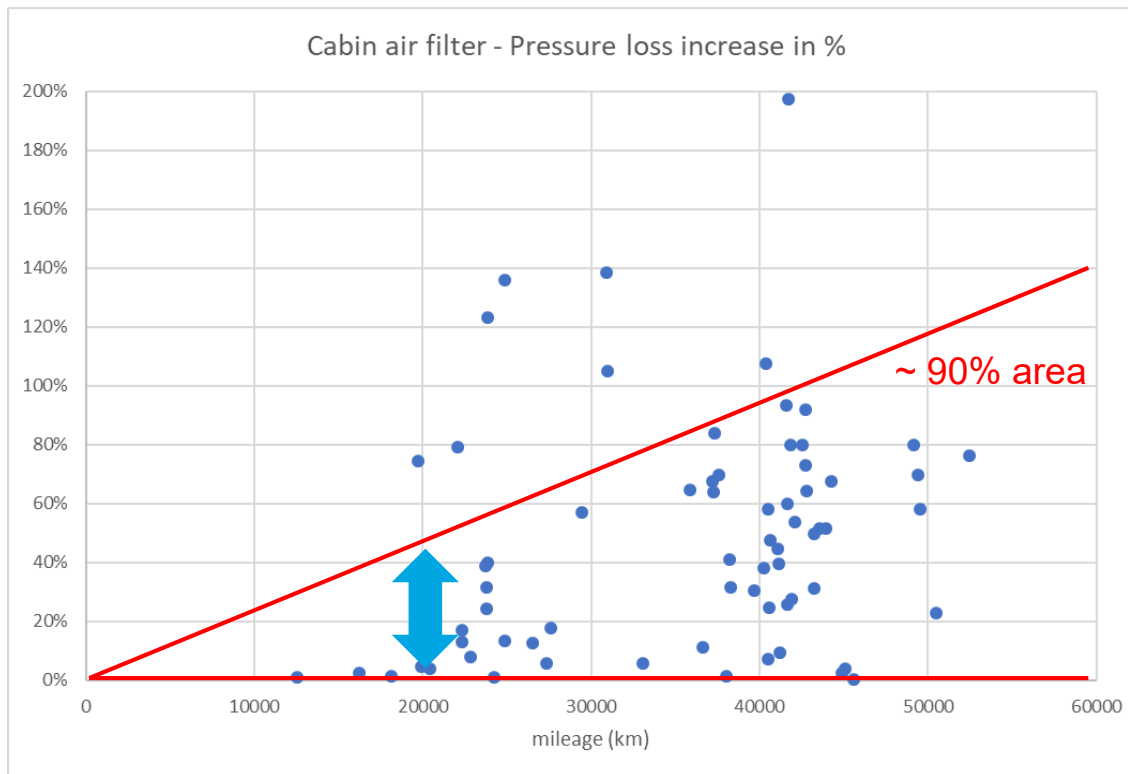
- Measurement of the used cabin air filter pressure loss at the DIN 71460-1 test rig
- Measurement of the pressure loss in the test rig @ 23°C and 50% rH
- New filter pressure loss value taken from the OEM specification (no measured value)

# Influence of the Cabin Air Filter Age on the Pressure Loss Test results



- Multiple different car models
- Multiple different filter suppliers

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## Conclusions

- After a given km mileage (e.g. 20.000 km) the pressure loss increase of the cabin air filters vary between 0% up to 100%.  
  
=> this will influence the HVAC air volume flow, the filtration performance and the indoor air quality from car to car.
- The definition of the real-world driving conditions for used cars by the km mileage alone is not sufficient.
- The definition of the real world driving conditions should add the cabin air filter condition, by defining a certain pressure loss target level for the filter element.