



EUROPEAN AVIATION SAFETY AGENCY
AGENCE EUROPÉENNE DE LA SÉCURITÉ AÉRIENNE
EUROPÄISCHE AGENTUR FÜR FLUGSICHERHEIT

EASA - SAMPLE Project

Development of a new Certification
Requirement regarding the aircraft engine
non-volatile Particulate Matter emissions



Background

- Environmental challenges for aviation:
 - 5% traffic increase per year
 - Impact on climate
 - 'Carbon-neutral' growth by 2020, -50% by 2050
 - Local air quality
 - Noise

- Current certification requirement is related to the visibility issue
 - Measurement of the Smoke (Smoke Number)

- Fine Particles have an impact on the atmosphere and health
 - Need to improve the certification requirement to take into account these effects
 - Measurement of particle mass and number

- SAMPLE project started 2009 and is still on-going
 - Evaluation of sampling, measurement systems
 - Measurements at the exhaust of aircraft engines
 - Contribution to the drafting of an Aerospace Recommended Practice

- European project coordinated internationally
 - Involving European research institutes, universities, engine manufacturers
 - ICAO – Committee on Aviation Environmental Protection (CAEP)
 - SAE – Committee on Aircraft Exhaust Emissions Measurement (E-31)



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More information

<http://easa.europa.eu/environment>

<http://www.icao.int/environmental-protection>