

AIR WELCOMES THE PUBLICATION OF A STANDARDISED METHOD TO COLLECT VEHICLE INTERIOR AIR QUALITY DATA

Testing to the CWA 17934 methodology will enable comparison of vehicle filtration systems

- A major milestone on the road to improve air quality inside vehicles.
- Test data will reveal the actual levels of particulate matter for particle number and mass.
- Tests conducted on-road to reflect urban driving, where the risk of particle ingress is highest.
- The testing methodology allows the performance of vehicle ventilation systems to be fairly compared.
- Developed through dialogue and agreement with a broad range of European stakeholders.

23 May 2023: **The AIR Alliance** (Allow Independent Road-testing), the independent alliance set up to improve air quality by promoting independent, on-road vehicle emissions testing, welcomes the publication of the CEN workshop agreement CWA 17934, the real drive test method for collecting vehicle interior air quality data.

Issued by The European Committee for Standardisation (CEN), the CEN Workshop Agreement (CWA 17934 produced by CEN Workshop 103), the group worked on the challenging area of air quality inside light duty vehicles (categories M₁ and N₁) to address two priorities:

- (i) to provide scientific data, relevant to the growing awareness of the health effects of poor air quality inside light-duty vehicles from particle ingress from outside;
- (ii) to provide a methodology which measures the value of pollution ingress that is repeatable and independent of the level of pollution outside and the driving style (within defined limits).

The publication of CWA 17934 reflects contributions from more than 40 scientists, consumer groups, policy makers, engineers and NGOs, working together for nearly three years under the chairmanship of **Nick Molden**, Co-founder of the **AIR Alliance** and Founder of Emissions Analytics, to develop this standardised and recognised methodology.

The issue of measuring vehicle interior air quality is an evolving area but because the air quality inside cars and vans is currently un-regulated, CWA 17934 provides a firm foundation for evaluation and the basis for further research, with a particular focus on the ingress of ultrafine particles.

Massimo Fedeli, Co-founder and Operations Director of the AIR Alliance said: *“Following our ground-breaking work with on-road tailpipe emissions of NO_x and CO₂ and the launch of the AIR Index ratings in 2019, we turned our focus to the quality of air inside vehicles.*

“Cabin air quality is un-regulated and un-reported, yet it affects everyone, both drivers and passengers alike. The AIR Alliance brought together world-leading experts through CEN to find a repeatable way to collect the critical data during on-road, urban driving, where pollutants

are at their highest levels of concentration. Armed with this information, policy makers, fleet owners and citizens can make informed decisions about the performance of vehicle ventilation systems to protect exposure to harmful particulates.”

The CEN Workshop 103 reached agreement on the specific and detailed criteria which must be followed during the tests to ensure that a result is valid and repeatable across multiple instances of the same vehicle captured using **P**ollution **I**n-cabin **M**easurement **S**ystems (PIMS) equipment.

The requirements of the methodology demand at least three separate tests on each model, within specific boundary conditions* at urban speeds with each test lasting at least 30 minutes.

Nick Molden, Co-founder of the AIR Alliance and Chair of CEN Workshop 103 said: *“I would like to thank all the participants in the CEN workshop, more than 40 in fact, who gave their time and advice to ensure that we now have the most effective methodology to create repeatable and comparable tests of collecting vehicle interior air quality data for light-duty vehicles.*

“This is an evolving area and during the workshop there was much technical discussion about the benefits of measuring particle number as well as particle mass. The AIR Alliance believes that particle number measurement is a priority, because of the emerging evidence for negative health effects, which has been regulated at the tailpipe since 2010, but not yet inside the vehicle.

“The AIR Alliance welcomes the recent news that CWA 17934 methodology is now being used as a building block of the United Nations Economic Commission for Europe vehicle air quality working group’s work in this area.

*More details about CWA 17934 and the boundary conditions are available at the CEN website

https://standards.cencenelec.eu/dyn/www/f?p=CEN:110:0:::FSP_PROJECT,FSP_ORG_ID:76650,2654151&cs=1A37B6A2248CB063033111B9F708BAB58

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Contacts

Nick Molden / nmolden@allowair.org / T: +44 (0)7765 105902

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About the AIR Alliance

The AIR Alliance (Allow Independent Road-testing) is an independent alliance of public and private organisations, which promotes the voluntary uptake of independent on-road emissions testing.

The AIR Alliance’s key objective is to contribute to delivering a cost-effective and timely reduction in harmful vehicle emissions in urban areas, while ensuring the lowest CO₂ emissions from the global vehicle fleet.

The AIR Alliance seeks to empower citizens, industry and public authorities to take informed decisions on their mobility practices and policies by promoting full transparency on vehicle emission levels.

In 2019 the **AIR Alliance** published the **AIR Index** ratings to compare the on-road tailpipe NO_x emissions for cars, followed in 2020 by the on-road CO₂ emissions and fuel economy. These have since been used by policy makers, public authorities and citizens across Europe to make informed decisions about vehicle choice.

For more information about the **AIR Index** visit <https://airindex.com/search/>

Background to the establishment of the CEN Workshop 103 Agreement CWA 17934

Emissions Analytics (EA), founded by Nick Molden (Co-founder of **AIR**), was a pioneer in methodologies to test on-road tailpipe emissions using Portable Emissions Measurement Systems (PEMS) equipment. Since 2018 EA has also independently tested the air quality inside vehicles using **P**ollution **I**n-cabin **M**easurement **S**ystems (PIMS) equipment, and the insight gained from more than 100 tests conducted by EA informed the development of the CEN Workshop agreement.

For more information see <https://www.emissionsanalytics.com/vehicle-interior-air-quality>.