Developments in testing Diesel Particulate Filters

Hens PEETERS WEEM

RDW

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PTI in EU

• Since May 2018 PTI is more standardized in EU: Directive EU 2014/45:
  • Standardized inspection methods and results
  • Harmonised skills for inspectors
  • Harmonised requirements for equipment
  • Fields defined on the inspection report
Emission and 2014/45

- For diesel vehicles, the emission requirements have become more stringent
- EOBD can be used
- Exhaust measuring of smoke
Developments during the implementation time
• Modern Diesels are equipped with a Diesel Particulate Filter that is very efficient.
• Up to 99% efficiency
• It cleans the air when it comes to particulate matter
• We want to preserve these benefits for the environment
A new reality

• New emission systems really help to keep the air cleaner, but malfunction and tampering is undoing this profit
• We need to find new methods of testing to act against these practices
DPF

- Wear
- Broken
- Not performing sufficiently
- Manipulated
- Removed

- Not possible to check this in the current PTI practice
NPTI workgroup

• Belgium, Germany, Switzerland, UK and NL

• Manufacturers of particle counters
Organisations involved in NL

- Ministry of Infrastructure and Water management
- Netherlands Vehicle authority
- Netherlands Metrology Institute
- National research organisation
Objectives NPTI group

- Possibility to check PN in a PTI environment
- Suitable equipment for a reasonable price
- A short test method
- Intended for EU-wide use
- Setting limit values
- Correlation between type approval and PTI
Delivered

• Requirements for test equipment
• Proposal for the test method (parameter)
• Proposal for limit values
• Correlation between type approval and PTI
  • TNO and JRC
• During the process the group extended
• More than 10 Manufacturers involved
  – High availability Equipment on short term
  – Reasonable prices expected
  – Test method is simple
• All information is freely available and can be used by all EU memberstates
Prototype particle counters for PTI
Introduction in PTI

• Targetdate of introduction:
  – Belgium in 2020
  – Germany in 2021
  – Netherlands in 2021

Attention: This can lead to export of vehicles that do not meet the requirements
• Aim of this presentation is
  • to inform all EU Member States about the short term solutions
  • Try to achieve a European approach on a voluntary basis
  • Sharing knowledge
  • Keep working on a sustainable World
• In South and Middle America some countries are measuring PN.
• Emissions was a topic on the CITA conference in Korea last April
• Tampering is a key topic on the meeting for policymakers and non-profit organizations in October in London, feel Welcome.
Thank you for your attention