



Developments in the Netherlands with regard to checking vehicle emissions in PTI

Louis Zuidgeest, 26 April 2022

The twenty-seventh meeting of the Informal Working Group on Periodical Technical Inspection (IWG on PTI)

Netherlands Ministry of Infrastructure and Water management



Developments on the following topics:

1. Introduction of Pn-test for checking DPF's starting from 1 July 2022
2. Study into PTI check of three-way catalytic converters of petrol cars
3. Exploratory study into PTI check of SCR-catalytic converters of diesel cars
4. Exploration of monitoring of the use and emissions of mobile machines





1. Pn-test for DPF's in PTI starting from 1 July 2022



- Instrument : Particle counter with spec's according to NPTI-working group
- Procedure : 15 sec. measurement time
- Vehicle : Low idle condition
any vehicle conditioning allowed
- Limit value : 1,000,000 particles per cm³





2. PTI check of three-way catalytic converter petrol cars

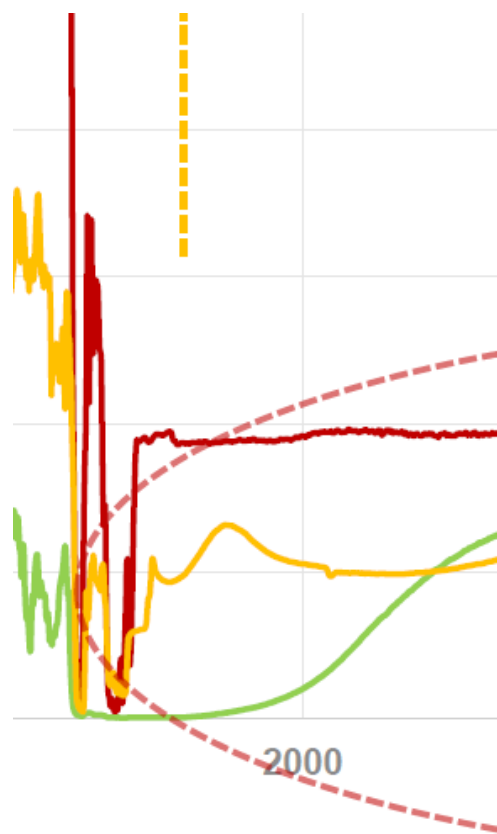


- Estimated 6% of non-functioning three-way catalytic converters
- Study by TNO into possibilities for detecting non-functioning converters (<https://publications.tno.nl/publication/34639407/wqLoW7/TNO-2022-R10659.pdf>)
- One possibility is to re-introduce the four-gas test instead of reading OBD
- Stricter rejection standard for lambda and stricter test conditions
- Further possibility is intensifying market surveillance of the sale of replacement catalysts





3. PTI check of SCR-catalytic converter diesel cars



- In 2022 a limited exploratory study will be executed by TNO
- Two options will be investigated:
 - Hot idle test of about 15 sec
 - Cold test of 3 min for heating up the SCR catalyst
- LD: Euro-6d, HD: Euro-VI
- Directive 2014/45/EU has no basis for introducing a test for checking the operation of SCR catalysts



4. Monitoring the use and emissions of mobile machines



- Due to the nitrogen deposition in nature areas, there are strict requirements for mobile construction machines in the Netherlands.
- An approach is being developed to check which machines are used and whether the SCR catalytic converter and the particulate filter are working properly.
- More extensive control based on on-line monitoring, not suitable for PTI

<https://citainsp.org/wp-content/uploads/2021/03/Emission-Monitoring-and-Periodic-Inspection-EMPI-of-mobile-machines.pdf>



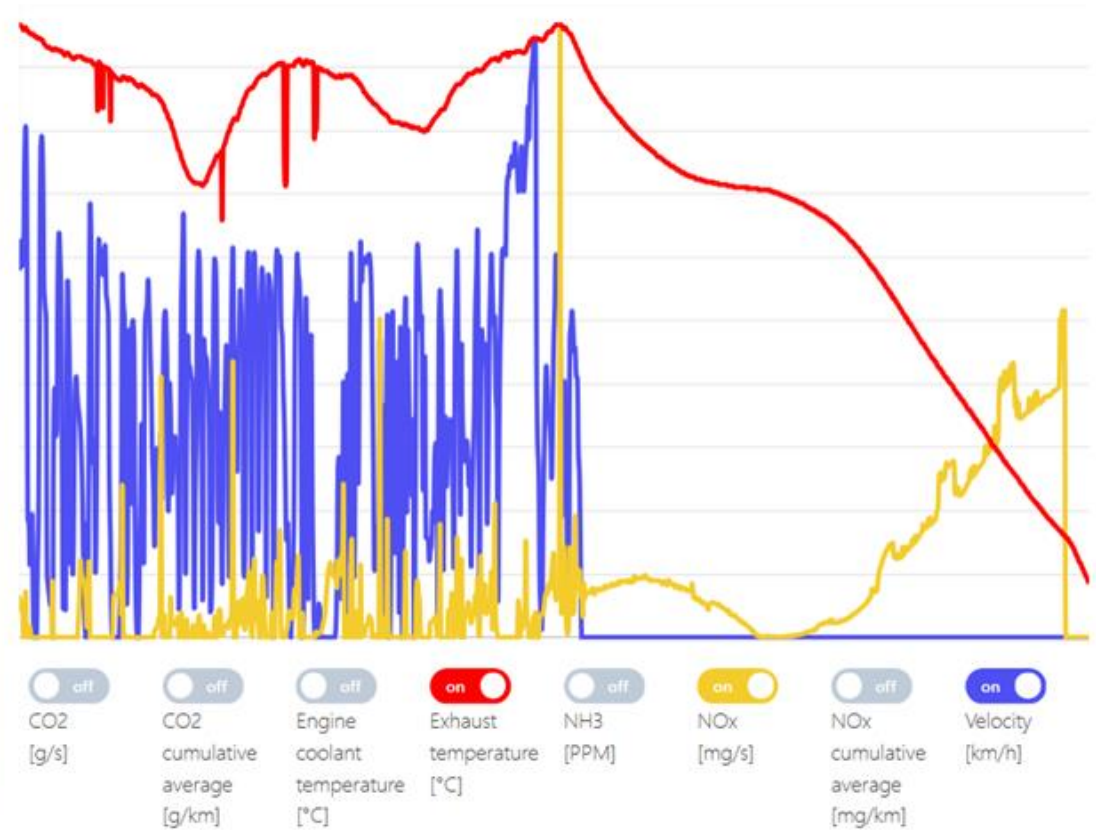
Start	End	Duration	Average speed	CO ₂	NO _x	Fuel consumption
07:47	08:09	00:22:08	3.5 km/h	10717.4 g/km		400.5 liters per 100 km

Map

Route



Result NOx-monitoring





Thank you for your attention

