



Informal document **WP.29-191-34** 191<sup>st</sup> WP.29, 14-16 November 2023 Agenda item 7

New PTI-test for checking particulate filters of diesel cars with a particle counter

Proposal to amend Rule 1 and R.E.6 of the 97 Agreement

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Genève 15 November 2023

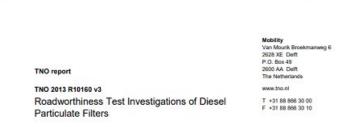
### How it started in 2013

$\leftarrow \rightarrow \circ G$	independent.co.uk/We-style/motoring/motoring-news/diesel-cars-ilegally-pump-out-dangerous-pollutants-after-garages-remove-filte	ts-designed-to-out-a6689191.html		0
😵 INDEI	PENDENT News US Election Voices Culture Lifestyle Tech Sport Daily Editi	ion	Q 🏽 🕿	≡
	Diesels illegally pumping o after garages remove filter cut emissions	out pollutants rs designed to		
	Air pollution from diesel particulates has been linked to 29,000	deaths a year		
	Douglas Grant, Jamie Merrill   Saturday 10 October 2015   💭 20 comments			
	(1) (2) (2) (613)	Vind ik is Click to follow		

A lot of advertisements offering removal of particulate filters by diesel vehicles on the internet, but:

Almost no rejections in PTI

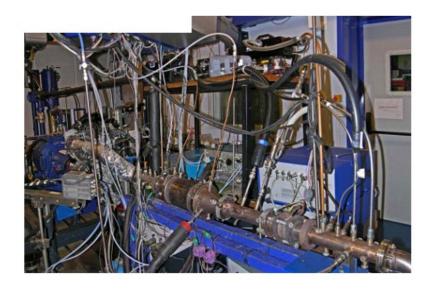
#### Assignment to TNO to conduct research 2013 – 2015:



o innovation for life

### Is there a problem?

Date 19 June 2015

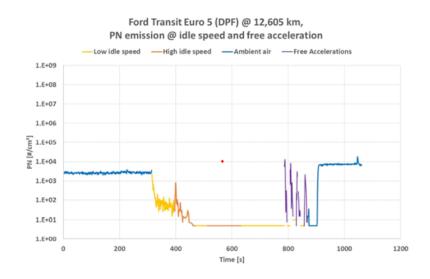


Result: The legally prescribed opacity test is not sufficient for modern vehicles with diesel engines.

#### Why a complete new test?

Opacity test is not suitable for modern Diesels

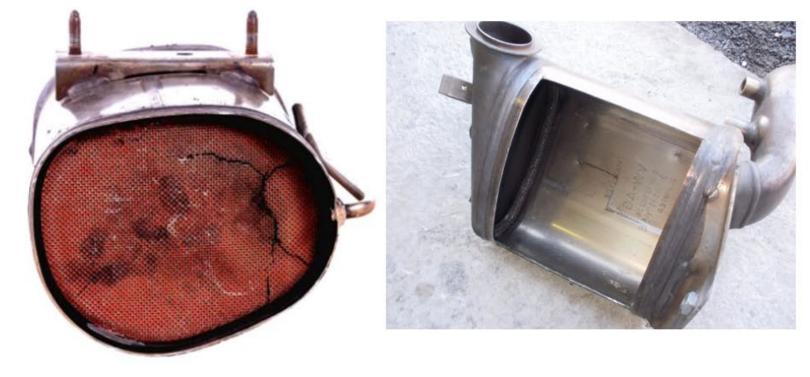
#### Fraud with emissions systems



- Opacimeter is not able to reliably measure the low concentration of emissions of a vehicle with a closed particulate filter.
- Vehicles with a filter that does not work properly pass the PTI without difficulty
- Even if the filter is removed, the measured value remains below the opacity measurement limit
- Vehicles with a particulate filter emit fewer particles than those present in ambient air

# Diesel filter damaged of removed





# Reading OBD and opacity test not suitable





## NPTI working group started in 2014:

Germany, Belgium, Switzerland, UK, the Netherlands, Equipment industry, Metrology institutions, TNO, Environmental organizations



Their assignment:

- Develop a new PTI test method for modern diesels;
- Develop a device suitable for the PTI
- Develop a testing method
- Establish limit values

## Some instruments:



# Developments and results from 2022

- Introduction of the new test in:
- Belgium July 2022
- Switzerland January 2023
- The Netherlands January 2023
- Germany July 2023
- Summer 2023: Recommandation for PN test from European Commission.
  EU Commission will introcuce PN test in the new proposal in the Roadworthiness Package
- Interest from all over the world in introducing this test.

## First results in Europe

- First results:
- Different countries control different emission classes. ranging from Euro 5 or Euro 6
- The older the vehicles, the more rejection.
- Rejection percentage varies between 6.5% and 15%

# Proposal to amend Rule 1 and R.E.6 of the 97 Agreement

• Rule 1: Option to use this test, no obligation.

• R.E.6 Specifications, test method.

• In cooperation with GRPE and adopted by GRPE and submitted to WP.29