



3.8.2016

## NOTICE TO MEMBERS

**Subject: Petition No 1412/2015 by S. N. and R. S-N. ( German) on cheating software in cars**

### 1. Summary of petition

Petitioners protest against the decision of the EU to permit the proven manipulation of software in cars and motorcycles for a few more years. According to the petitioners the limit values for nitrogen dioxide, particulate matter and carbon monoxide will therefore be further exceeded. It is the opinion of the petitioners, who suffer from asthma and multiple allergies, that their right to physical integrity is being violated by this decision. In contrary to the situation in the United States, European citizens do not have the possibility to hold polluters directly responsible. The petitioners therefore expect the European Parliament to ensure that a reduction in health risks is prioritised over economic interests and that the EU promotes citizen-friendly consumer protection.

### 2. Admissibility

Declared admissible on 10 Mai 2016. Information requested from Commission under Rule 216(6).

### 3. Commission reply, received on 3 August 2016

The Commission understands that the petition refers to the decision taken by the Member States and endorsed by the European Parliament to allow the introduction of the Real Driving Emissions (RDE) legislation with the so called "not-to-exceed" approach on the individual Portable Emission Measurement Systems (PEMS) tests and the Conformity Factors of 2,1 until 2020 and 1.5 from then onward for NOx emissions.

The Commission notes that with the RDE legislation today's divergence between laboratory and real driving emissions of NOx will be brought down from the current average of 400% to a maximum of 110% from September 2017 and a maximum of 50% from January 2020. This

is a significant reduction compared to the current discrepancy, even more important if put in terms of actual real emissions: the current average real NO<sub>x</sub> emissions of 400mg/km will be reduced to below 168mg/km (September 2017), then to below 120mg/km (January 2020). The real amount of NO<sub>x</sub> emissions will be more than halved.

The margin of 1.5 for NO<sub>x</sub> emissions will be under annual revision, in order to allow an adjustment toward lower values as the PEMS measurement results become more accurate with the evolving technology.

### Conclusion

In conclusion, the Commission believes that the RDE legislation recently adopted and the one in preparation will prevent the use of defeat devices in the near future and will strongly limit the gap between type approval emissions and real driving emissions.

For a more detailed description of the RDE from a technical point of view, please refer to the attached Appendix.

### Appendix to Petition 1412/2015

The purpose of testing vehicles on roads (RDE tests) is to introduce a degree of non-predictability into the testing procedure, which is the essential difference to laboratory testing on a pre-defined test cycle.

For technical reasons, measurement results from RDE testing using portable emission measurements systems (PEMS) are associated with higher uncertainties than results measured in the laboratory. These technical uncertainties of the measurement equipment, if not duly taken into account, could have two different unwanted results: vehicles that actually are compliant would fail a PEMS test or vehicles that actually are non-compliant would pass a PEMS test. The concept of Conformity Factor (CF) helps overcome this problem.

The CF sets the maximum allowable emissions during a single RDE trip as multiples of the Euro 6 limits defined in Regulation (EC) No 715/2007. This allows room for statistical and technical uncertainties of the measurement procedure to be taken into account as well as for variability of the RDE test. As the emissions of a vehicle under "normal conditions of use" are not simply equivalent to the emissions of the vehicle measured at an individual RDE trip for statistical and physical reasons, the not-to-exceed emission limits are not set to the regulatory Euro 6 emission limit.

With a conformity factor, the focus is put on the vehicle's average compliance with emission limits. For example, regulatory emission limits may be exceeded when driving up a steep hill, which then must be compensated by emissions below the regulatory emission limits under different conditions, such as driving moderately in the city, so that the average emissions, when weighing these conditions according to their statistical occurrence, are not above the limits.

Given technical limits to improve the real world emission performance of currently produced diesel cars in the short-term and an intrinsic uncertainty of Real Driving Emissions test

measurements, Member States agreed on a phasing-in period for reducing the divergence between the regulatory limit that is measured under laboratory conditions and the values of the Real Driving Emissions procedure when the car is driven by a real driver on a real road.

According to the agreed RDE test procedure, car manufacturers must reduce the divergence in two steps:

1. car manufacturers will have to bring down the discrepancy to a conformity factor of maximum 2.1 (110%) for new models by September 2017
2. this discrepancy will be brought further down to a factor of 1.5 (50%), taking account of technical margins of error, by January 2020 for all new models. As mentioned earlier, with the improvement of the PEMS technology, the conformity factor will be reduced further.