

OICA statement on the progress of the PMP programme

After presentation of the detailed project plan for the PMP programme, OICA

- fully supported the improvement of the particle mass measurement and
- raised concerns with the particle number measurement.

Based on earlier statements of OICA to GRPE we still have the following remarks:

- It is becoming increasingly difficult to comment on the detail of the regulations and the associated calibration / accumulation of errors document as OICA members do not have fully integrated PMP PN measurement systems available and commissioned to date.
- One cannot discuss PMP without considering its application in the European Union which is scheduled mandatory for September 2011 (Euro5+). It might be in the interest of the environment, of governments and of vehicle manufacturers to certify Euro5+ vehicles earlier. As a consequence OICA members need the equipment according to latest PMP specifications and the corresponding calibration equipment.
- A significant number of OICA members are anticipating installation and commissioning of the PN measurements systems during Q1 2008, with the rest following in Q2. OICA is still of the opinion that the development of a new procedure must be backed-up with a round-robin test. Latest examples are the WMTC and the application of PMP to HDV. Although GRPE did not decide to follow OICA's position, OICA will initiate an internal round-robin and has invited technical services to evaluate the equipment, variability and calibration procedures starting Q3 2008 (anticipated). Whilst a few members have PMP-like systems, the particle experts agreed that it is not appropriate to run the round robin on the PMP-like systems since it will not be known what variability is due to the differences in measurement systems (since they can not be run in parallel) and which are the differences due to the equipment being operated slightly differently. It may be, that as an outcome of the industry test programmes, OICA will propose modifications / enhancements to the calibration procedures and to the ECE-83 particle number test procedure through the UN-ECE GRPE meetings. We hope that these will be discussed and incorporated at the appropriate time.
- There are still critical points of PN calibration and measurement procedure. The accuracy of the PMP particle number measurement method has significantly improved since last GRPE in June '07 but remains a matter of concern for the purpose of emission certification:
 1. Counting accuracy and inlet efficiency of the CPC
 2. Accuracy of VPR reduction factors
 3. Allowed penetration efficiency degradation between 100 and 30 nm particles

Following an OICA assessment the results are up to 40% error margin at instrument level and additionally up to 25% error margin offset between different systems. But we are still waiting for the detailed error analysis from UK NPL.