WLTP DTP PM/PN subgroup	
Title	Minutes of 1st Web Conference Meeting
Working Paper Number	WLTP-DTP-PMPN-01-04

MINUTES OF 1ST WLTP-DTP-PM-PN WEB CONFERENCE

1. The first WLTP-DTP-PM-PN web conference was held on 7th July 2010. Participants were as follows;

   Chris Parkin - UK / Chair
   Caro Hosier - Ford Motor Company / Co-chair
   Martin Helbardt - GM powertrain
   Felix Koehler - TUeV Nord
   Winifred Matatko - TUeV Nord
   Mr Sakai – JAMA
   Bill Silvis - AVL North America
   Les Hill - Horiba
   Yuichi Goto – NTSEL Japan
   John May - AECC
   Mr Sawada – JAMA
   Jon Andersson – Ricardo
   David Clark – Ricardo
   Mahmoud Yassine - Chrysler
   Olle Berg - Volvo Cars
   Wolfgang Thiel - BMW
   Rainer Vogt - Ford Motor Company
   Laura Bigi - PSA
   Jean-Claude Momique – PSA
   Gigi di Bernardo - UTAC
   Hidenori Moriya - JAMA

Terms of Reference

2. The Terms of Reference for the subgroup (as contained in WLTP-DTP-PM-PN-01-02) were agreed.

Strategic Decisions

3. It was agreed that measurement procedures for both Pm and PN would need to be specified by the group, but that the decision as to whether to mandate both measurements or allow them as alternatives was a political decision to be taken at a higher level and later date by Contracting Parties.

4. Anticipated emissions levels which would need to be catered for by the measurement techniques were discussed. It was agreed that, based on

emissions limits, OBD threshold limits and measurements procedures in existing legislation, measurements were likely to be required in the following ranges;

- PM: as low as 2mg/km and as high as 50mg/km
- PN: at least as low as $6x10^{11}$ and as high as $5x10^{13}$ particles/km (bearing in mind potential future requirements for PN measurement in OBD failure mode testing)

5. It was agreed that it would be desirable to include procedures for PN measurement during DPF regeneration within WLTP rather than Contracting Parties' regional implementing regulations. However there are a number of uncertainties regarding whether these measurement procedures can be specified within the current phase of WLTP. It was agreed that there was a need to gather and review available data on the concentrations and composition of particles during DPF regen in order to reach a decision on this point.

6. It was agreed that measurement procedures should be suitable for measurement of emissions from both compression ignition and spark ignition (both direct injection and port fuel injection) engined vehicles.

Plan of Activities

7. The proposed scope of activity was agreed including the approach of drawing on existing regulatory measurement procedures except where there was a clear need to develop new approaches. It was noted that current regulatory PM and PN measurement procedures quantified different fractions of a vehicle's particle emissions. It was also noted that differences in measurement procedures meant that the material collected as PM differed in regional legislation. This would need to be considered when the content of regional legislation was compared and a decision made as to how to specify PM for the purposes of WLTP.

8. It was agreed that comparison of US, UNECE and Japanese regulations should be sufficient for the purposes of the subgroup's activity.

9. The proposed timing plan was agreed as broadly acceptable. It was noted that face to face meetings were likely to be necessary when it came trying to agree which content to use for WLTP. It was agreed that whilst the subgroup would look at procedures in existing legislation CARB should be invited to provide views on whether they expected to amend PN measurement procedures relative to those specified in UNECE Reg 83 in their legislation in the near term.

10. It was also agreed that the next web conference meeting should aim to subdivide the content of PM and PN measurement procedures into smaller subject areas and task smaller groups with comparing the content of regional legislation in each subject area and proposing preferred WLTP content to the September subgroup meeting. A decision will be taken in August as to whether to conduct the September meeting as a web conference or a face to

face meeting. Participants were asked to hold the whole day free in their calendars in case of the latter.

Division of Activity

11. The Chair agreed to review UNECE Reg 83 for PM & PN relevant content. Ford agreed to review the US 40 CFR Parts 86 and 1065. JAMA agreed to discuss and consider whether they or JASIC could review the Japanese Attachment 42 legislation and report back to the chair within 2 weeks.

12. The Chair and Co-chair agreed to produce and circulate a template for the comparisons setting out PM and PN relevant subject areas in the order they occur in 40 CFR Part 86, drawing on comparison spreadsheets produced by VDA, India and others.

13. Ricardo asked whether the US were considering permitting the use of partial flow dilution systems for diesel PM measurement. The Chair agreed to seek information from EPA on this point.

Other Business

14. The potential impact of drive cycle characteristics on PM & PN sampling conditions was raised. The Chair observed that information on WLTP drive cycle characteristics was unlikely to be forthcoming until towards the end of the year, although three separate phases could reasonably be anticipated.

15. The Co-chair noted ACEA's view that PM filter paper collection efficiency specification should be discussed and clarified by WLTP.

Actions

i) The Chair will circulate current US, UNECE and Japanese regulatory texts

ii) The Chair will invite CARB to participate in the subgroup and/or provide their views on future development of PN measurement procedures within CARB legislative requirements

iii) JAMA to report back on whether JAMA or JASIC are willing to review the Japanese legislation for PM & PN relevant content.

iv) The Chair and Co-chair will agree and circulate a template for reviewing PM and PN procedures in existing regional legislation

v) The Chair will seek clarification from EPA of whether partial flow dilution systems are likely to be permitted in US legislation in future for PM sampling for light duty vehicles.