Minutes of 3/Data Experts Group meeting, Geneva, 2007/04/02 - 03

1.   Discussion of the consolidated database and limit values
1.1   Japanese data points
Noted : The additional 13 points from Japan had been incorporated into the database
          circulated with 14-NTF-07
       : The new PMR and the old cc classes were more or less the same (80cc = 25 PMR,
          125cc = 50 PMR and there was not a big market between 125 and 175cc)

1.2   Class 1 limit values
Noted : no data needed deletion
Agreed: The standstill value would be 73 dB(A)
       : The rationale for 73 dB was that: the highest datapoint for R41 was at 72 dB. Given
          the 1 dB deduction from the test result in R41, this 72 dB was 2 dB below the Class 1
          limit of 75 dB. To have the same 2 dB difference with the new ISO method, 2 dB(A)
          should be added to the highest result for the ISO method in order to obtain the
          appropriate standstill value

1.3   Class 2 limit values
Noted : The one outlying data point (R41:78 dB; ISO: 80 dB) was valid (R41: 3rd gear; ISO:
          2nd gear) and would be referred to as an example of unusual gear design which took
          the vehicle outside the general classification parameters
       : The CVT result close to 75 dB was valid
Agreed: The standstill value would be 75 dB(A)
       : The rationale for 75 dB was that: the highest (non-outlier) datapoint for R41 was at
          77 dB, which was identical to the Class 2 limit (i.e. with no margin); therefore the
          highest datapoint from the ISO method would determine the appropriate standstill
          value

1.4   Class 3 limit values
Noted : There were two basic options for tuning a motorcycle to meet the R41 test, gearing
          and electronics
       : DEG checked some individual USMMA and Indian vehicle tests, all second gear and
          all CVT tests and they were found to be valid
Agreed: The filter to be used to detect "tuned" vehicles would be a difference of more than 2
          dB(A) when the R41 result was subtracted from the ISO result (LWOT-LECE>2 dB)
       : A possible second, additional, filter for excluding outlying datapoints could have
          been LCRS > 77 dB(A) but this would not be used
       : All tuned vehicles would be excluded from the limit value discussion (4 data points
          in all)
       : Motorcycles with results outside the CoP value would not be included in the limit
          value calculation (2 points)
       : In the case of data points that had been excluded from the limit value calculation,
          recalculating Lurb using the LR41 noise levels for the relevant gear showed a
          reduction of about 2 dB (79-77 dB)
       : The standstill value would be 78 dB(A); which would mean 11% of current
          motorcycles would be eliminated unless modified
       : The rationale for 78 dB was that: with the exception of the excluded datapoints, the

highest valid datapoint from the ISO method(78 dB) would determine the appropriate standstill value

1.5   The cost impact of the new test procedure
Noted : The cost depended on the number of test runs but an additional 50% would, in any case, come from the need to set up the acceleration rates to be used in the tests
       : There would be a need for some new equipment (e.g. for speed measurements) but this would already normally be available at main test sites
       : It was possible that the time needed for the test would require additional test track rental but experience so far showed that this was not likely

1.6   How to calculate the cost-effectiveness of new (lower) limits
Noted : If the limits remained at the standstill level there would be no need to carry out a cost-effectiveness study
       : The standstill limit values would be the starting point for any cost-effectiveness analysis for lower limit values.
       The exclusion of some vehicles in the database with the proposed standstill values already meant that 7% (Class 2) and 11% (Class 3) of the existing range would have to be modified or dropped
       : The contribution of motorcycles to Leq studies was too small to register and the same therefore applied to the derivative Lden (day, evening night) calculations
Agreed: TUV would see if any of the current noise models could be used for cost-effectiveness work
       : The benefits could only be expressed in qualitative terms e.g. a more representative cycle, better control of RESS, etc.
       : Manufacturers would collect cost data for vehicle noise reduction technologies and measures
       : All possible cost-benefit and cost-effectiveness approaches would be listed with their advantages and disadvantages

2.   ASEP test procedure
Noted : 07-NTF-07, the final version agreed on 07/02/19, would be used for the verification tests and to define parameters such as the cut-off line below which an ASEP test would not be necessary
Agreed: JAMA would do tests on 7 models, and DEG agreed that this would be enough
       : ACEM would ask Triumph, Ducati and BMW to repeat their tests
       : Honda Europe and Yamaha Europe would be asked to test motorcycles (80 – 150 kW/t) instead of the previously tested scooters
       : TUV would ask if MOT/BAST could also participate in further test work
       : JAMA would ask JASIC if the Japanese administration was going to do more tests
       : IMMA would check if USMMA could repeat their tests
       : A data input form would be created by JAMA and TUV and checked by DEG as soon as possible
       : The graph of L_{ASEP} vs PMR would be a good way of presenting the data
       : The additional data between 80 and 150 kW/t would allow a decision on the final PMR threshold to be made
       : The following test programme timetable:
         - data to IMMA by 07/06/30
         - data to be checked on 07/07/02, by DEG members attending an IMMA meeting on 07/07/03, and then circulated to DEG
         - JAMA and TUV to analyse the data in time for circulation **on 07/07/31,**

3.   The effect of reducing the number of test runs for type approval purposes from 3 to 2

Noted : The provisional report from Italy, which would be further checked before being circulated, that 2 test runs gave the same result as 3, and that a smaller number of runs had no effect on the final Lurb value and decreased the standard deviation

Agreed: If the further checking of the calculation confirmed the initial findings, DEG would propose that only 2 test runs be required

4.   Classification

Noted : The general equivalence of PMR and cc (80cc = 25 PMR, 125cc = 50 PMR)

: Engine capacity was not as well correlated with PMR as Vmax

: PMR was the basis of the test method and should be used as the basis of the classification

: Some engines could be used in motorcycles on either side of a classification line, so a family concept was needed to cover this situation. The ISO WG16 Chairman would prepare a draft

: The main problem area was around 125cc (50 PMR); JAMA and ISO WG16 Chairman would consider this specific issue

: The WMTC classification (engine capacity and v_{max} (well correlated to PMR))

5.   General arguments in support of the new Regulation

Agreed: The following general arguments in favour of the new method:

- it clearly prescribed operating conditions such as the acceleration rate and so was more robust than the current procedure
- there was an additional noise control by means of ASEP for the biggest Class 3 vehicles
- the advantages applied equally to OE and RESS

: TUV would look for examples of RESS that would be detected by applying the ASEP test

: All members would consider additional points to support the new method

6.   Report to R41

Agreed: For all points under consideration, DEG would prepare a set of slides, which would be updated as conclusions were reached

7.   Next meeting

Agreed: The FEG Secretary would see if week 32 would be suitable for FEG (2 days in Bonn)

: If FEG could meet in week 32 DEG would add 1 day to the meetings, because so many delegates were common to both groups

: DEG would meet in week 32 in any case, but without FEG the dates could be 07/08/07-08 starting at 14h00 and ending at 12h30

Dr NM Rogers