Transposition of Euro 6 requirements into UNECE Regulation No. 83
&
Proposed amendments to R.101 and R.103

GRPE 17-January 2013

Submitted by the expert of the European Commission
Background

• Need to update UNECE Regulations (notably R.83) for « Euro 6 requirements »

• TRL/Ecorys supporting the EC with this task

• Dedicated workshops have been held and invitations have been sent to GRPE members

• First drafts of the texts have been submitted to 65th GRPE as informal documents
  – R.83, R.101 and R.103
Scope

• UNECE Regulation No. 83
  – “… Uniform provisions concerning the approval of vehicles with regard to the emission of pollutants according to engine fuel requirements”

• EC Regulation No. 715/2007
  – “… on type approval of motor vehicles with respect to emissions from light passenger and commercial vehicles (Euro 5 and Euro 6) and on access to vehicle repair and maintenance information”
  – Implemented by EC Regulation No.: 692/2008; 595/2009; 566/2011; 459/2012; and 630/2012
Regulation 83

- R.83 Revision 4, 06 series of amendments includes up to Euro 5 requirements
- Objective: new series of amendments only covering Euro 6 requirements
- Proposal: include requirements from amending regulation EC No. 459/2012
  - Euro 6 legislation
- Proposal: also include requirements from amending regulation EC No. 630/2012
  - vehicles fuelled by hydrogen and mixtures of hydrogen and natural gas with respect to emissions
- Proposal: add Euro 6 specific elements from 692/2008

EC Reg. No. 566/2011 requirements already transposed
However some further amendments have been necessary to complete the transposition

EC Reg. No. 459/2012 and No. 630/2012 Requirements to be transposed directly into draft R.83 update

EC Reg. No. 692/2008 Add Euro 6 specifics that have not previously been transposed

STARTING POINT
Regulation 83 Revision 4, 06 Series of Amendments including amendments adopted at WP.29 in November 2012

Developing new series of amendments

‘EC specific’ elements not transposed e.g. access to repair and maintenance information

OUTPUT
Draft of Regulation 83 07 series of amendments for 65th GRPE in January 2013

Editing of current Regulation 83 to correct existing errors (mainly cross-references)

Implications ‘from’ and ‘to’ associated UNECE regulations (e.g. R.49, R.101, R.103)
Transitional provisions

• Euro 6 includes “phase-in” requirements on OBD-monitoring and particulates

• Proposal for R83-07 is to align with Euro 6 and include post 31/12/2013 stages as for EC Euro 6 (see table on next slide)

• R.83-07 replicates the EC transitional provisions in paragraph 12 (see Gantt chart, two slides on)
### EC Euro 6 -“phase in”

<table>
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<th>Character</th>
<th>Emissions standard</th>
<th>OBD standard</th>
<th>Vehicle category and class</th>
<th>Engine</th>
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**OBD standards**
- T, U and V covered by Interim OBD Threshold Limits  (Compression ignition vehicles only)
- W, X and Y covered by Preliminary OBD Threshold Limits
- ZA, ZB and ZC covered by Final OBD Threshold Limits
EC Euro 6 - “phase in”

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Main changes to R.83

- Euro 6 emission limits added
- Euro 6 transitional provisions included for OBD threshold limits and particulates
- Requirements for Hydrogen and H2NG fuelled vehicles added
- Amendments to correct existing errors in R.83-06 (mainly in cross-references)
Outstanding issues

• Some cross-references need to be amended/confirmed
• Some technical queries to be confirmed
• Approval mark to be updated
• Clearer diagrams/figures to be obtained
• Minor editing and formatting required

“[Editorial note: xxx]” used in draft document to denote the outstanding issues
Implications for other UNECE Regulations

• Other UNECE Regulations reviewed to identify implications from updating R.83
• Regulation No. 49 – Emission of pollutants of heavy vehicles.
  06 Series of Amendments, Annex 9A
  “2.4. Alternative approval
  2.4.1. Reserved\textsuperscript{14}
  \textsuperscript{14}This \textit{paragraph has been reserved for future alternative approvals (e.g. transposition of Euro VI into Regulation 83)}”
  – Alternative R49 approvals using ”Euro 6” Light Duty OBD and NOx control will need to be introduced after adoption of R83-07
Reg. No. 101 - Emissions of carbon dioxide and fuel consumption

• No Euro 6 specific new requirements

• Daytime running lamp requirements added (from EC No. 566/2011)

• Table of test requirements added (from EC No. 630/2012)

• Fuel consumption details amended to include hydrogen and H2NG (from EC No. 630/2012)

• Compressibility factors for gaseous fuels added (from EC No. 630/2012)

• Definitions updated (from EC No. 630/2012)
Reg. No. 103 - Replacement of catalytic converters for power-driven vehicles

• No Euro 6 specific new requirements

• Editorial amendments to update cross-references to R.83 (Revision 4)

• Deterioration factors need to be updated (Based on R.83 Revision 4)
Timeline

• First draft of R83 07 series of amendments to 65th GRPE, January 2013

• If experts agree, preparation of formal R83-07 document for 66th GRPE in June 2013

• If adopted by 66th GRPE, submitted to WP.29 in November 2013

• Similar timelines for R.101 and R.103
Thank you for your attention

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